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# Soil Characterization Report for River Channel (Area 22) and Areas Assimilated within the Channel (Areas 7, 10, 11, 14, and portion of Area 9)

## Guadalupe River Flood Control Project Construction Reach 3

**Prepared for the**

**Santa Clara Valley Water District**

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## List of Acronyms

| | |
|---|---|
| BTEX | Benzene, Toluene, Ethylbenzene, and Xylenes |
| CI | Confidence Interval |
| Corps | U.S. Army Corps of Engineers |
| District | Santa Clara Valley Water District |
| DI | Deionized |
| mg/l | Milligrams per liter |
| mg/kg | Milligrams per kilogram |
| PCBs | Polychlorinated biphenyls |
| RWQCB | Regional Water Quality Control Board |
| SMP | Soil Management Plan for Reach 3 |
| STLC | Soluble Threshold Limit Concentration |
| SVOCs | Semivolatile Organic Compounds |
| TCLP | Toxicity Characteristic Leaching Procedure |
| TPH-d | Total Petroleum Hydrocarbon as Diesel |
| TPH-g | Total Petroleum Hydrocarbon as Gasoline |
| TRPH | Total Recoverable Petroleum Hydrocarbon |
| TTLC | Total Threshold Limit Concentration |
| VOCs | Volatile Organic Compounds |
| WET | Waste Extraction Test |

# 1.0 Introduction

## 1.1 Flood Control Improvement Project

The Guadalupe River Project is a joint flood control project of the U.S. Army Corps of Engineers (Corps) and the Santa Clara Valley Water District (District) (Figure 1-1). This project includes channel improvements and bridge demolition and replacement along the Guadalupe River between I-880 and I-280 in San Jose, California (Figure 1-2). It will involve excavation and removal of about 1,000,000 cubic yards of soil from the river channel and embankments. The project will be constructed in three contract phases identified as Reaches 1, 2, and 3. Construction elements are detailed in the Corps General Design Memorandum, 1991.

As a local sponsor of the project, the District is responsible for conducting environmental investigations to assess the existence and extent of hazardous material within the construction area that will require special handling during excavation and disposal at an appropriately permitted offsite disposal facility. The District conducted a Level I preliminary site assessment and Level II hazardous material investigation along the project alignment and identified seven contaminated areas in Reach 3 that impact construction of the flood control project. The District further developed a soil Management Plan for the management of hazardous, designated, nonhazardous solid and inert waste, that will be excavated from these areas during flood control construction. The Soil Management Plan, Guadalupe River Channel, Flood Control Project Construction Reach 3, prepared by CH2M HILL in September 1994, includes a summary of the Phase I and Phase II project investigations, identifies the areas of concern in Reach 3, presents the criteria for classifying waste in these areas as hazardous, designated, nonhazardous solid, or inert for disposal purposes and outlines disposal options.

## 1.2 Purpose

The purpose of this document is to present the methodology used to characterize and classify the soil to be excavated from within the river channel (Area 22) in construction Reach 3 of the project. This document also presents the classification of the soil to be excavated from within Area 22 in accordance with the classification criteria outlined in the Soil Management Plan (SMP) for Reach 3 dated September 1994. The Soil Management Plan for Reach 3 presents a set of criteria to be used within Reach 3 to classify the soil to be excavated as either hazardous, nonhazardous designated, nonhazardous solid, or nonhazardous inert waste.

This report specifically addresses management of soil excavated from Area 22 (inclusive of Areas 7, 10, 11, 14, and a portion of Area 9) (Table 1-1), within Reach 3, during construction (Figure 1-3). The objectives of this report are to:

- Describe the investigations performed,
- Present the methodology used in evaluating the analytical results,
- Delineate areas with different contamination levels,
- Present the classification of soil, and
- Describe proposed soil disposal methods and reuse requirements.

# 2.0 Reach 3 River Channel Investigation

CH2M HILL conducted two phases of investigation for the District. Phase I was conducted between March 1991 and December 1992 and included work in all three construction Reaches. The results are documented in two reports titled "Project Alignment Report, Guadalupe Corridor Project, San Jose, California" and "Acquisition Properties Report, Guadalupe Corridor Project, San Jose, California" dated December 1991. The Phase II investigation included work in construction Reaches 2 and 3. Phase I and II sample locations are shown on Figure 2-1. This figure includes samples collected from all areas investigated, inclusive of Area 22. The results of the Phase I and II investigations conducted in the river channel (Area 22) and in areas assimilated within the channel (Areas 7, 10, 11, 14, and a portion of 9) are presented in Tables 2-1 through 2-4 and discussed below. Laboratory data sheets for reactivity and acute aquatic toxicity are included as Appendix A.

## 2.1 Summary of Phase I Investigations in the Reach 3 River Channel

Phase I investigations in the Reach 3 river channel consisted of collecting 15 shallow soil samples in April and June 1991 from within or immediately adjacent to the channel and performing analysis for metals; benzene, toluene, ethylbenzene, and xylenes (BTEX); total recoverable petroleum hydrocarbons (TRPH); total petroleum hydrocarbon as gasoline (TPH-g), and pH. The Waste Extraction Test procedure (WET) was also performed on certain samples to evaluate soluble metals concentrations in the soil.

Based on the results of the Phase I investigations, the river channel, Area 22, was identified as requiring further investigation.

## 2.2 Summary of Phase II Investigations in the Reach 3 River Channel

Investigations performed in the Reach 3 river channel (Area 22) and in the areas assimilated within the channel (Areas 7, 10, 11, 14, and a portion of Area 9) included collecting and analyzing 133 surface and subsurface soil samples. These samples were analyzed by one or more of the following analytical methods: TRPH, TPH-g/BTEX, total petroleum hydrocarbon as diesel (TPH-d), metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs), toxicity characteristic leaching procedure (TCLP), soluble threshold limit concentration (STLC) (both acid and deionized water), cyanide and sulfide reactivity, and acute aquatic toxicity. TPH-g/BTEX, TPH-d, VOCs, SVOCs, and pesticides and PCBs were either not detected or were not detected in sufficient quantities to warrant additional consideration. These compounds are discussed further in the SMP. The analytical results identified the presence of metals at elevated concentrations and TRPH. Results of all analyses are given in Tables 2-1 through 2-4 and acute aquatic toxicity results are included in Appendix A.

Approximately 77 soil samples were collected in Area 22 and an additional 10 were collected in Areas 7, 11, and 14 from within the river channel and analyzed for TRPH. TRPH concentrations ranged from nondetected to 96 mg/kg. Of these, 31 were below 10 mg/kg. Because a significant number of the analytical results are below 10 mg/kg and all detected TRPH is below 100 mg/kg, TRPH is not considered a constituent of concern in soil from within the river channel in Reach 3.

One hundred and twenty soil samples from Area 22 and an additional 13 samples total from Areas 7, 11, and 14 were analyzed for metals. The results of those analyses indicated that lead, copper, mercury, and nickel are present in selected samples at elevated concentrations, although no metals, with the exception of mercury, are present above Total Threshold Limit Concentrations (TTLCs), and none above Federal hazardous waste concentrations.

### 2.2.1 Summary of Sampling Methodology for Metals Analyses

Soil sampling within the river channel for the Phase II investigation was conducted as a number of discrete sampling events. The initial sampling event consisted of collecting and analyzing samples from 55 locations (73 samples in all) for total metals. This number of samples provided a sampling frequency of one sample every 115 feet of river channel. This sampling was supplemented by collecting 13 additional samples near where elevated metals concentrations were detected in the initial analyses to bracket the areas of elevated concentrations. Subsequent to these initial sampling events, 17 of the original locations were resampled (23 samples in all) to evaluate the consistency of the analytical results and provide additional soluble metals analytical data.

The results of the total and soluble metals analyses were plotted against their sample locations along the river channel (Figures 2-2a through d). Examination of these plots revealed that the majority of soluble metals analyses results that exceeded the STLC criteria occur between stations 134+00 and 148+00.

Because the WET analyses were performed only on samples with elevated concentrations of metals this data set was biased and did not provide a true statistical representation of the material in the river channel. To evaluate the soil within the river channel between Sta. 134+00 and 148+00, a sampling plan consistent with the methodology presented in the EPA reference manual SW846 was developed. This plan was discussed with Mr. Bruce Wolfe of the Regional Water Quality Control Board (RWQCB) and his verbal concurrence was obtained on February 22, 1994.

Based on the distribution of analytical results obtained in the initial sampling events, the approximate number of samples required to provide an accurate statistical representation of the soil between Sta 134+00 and 148+00 was calculated. To obtain the required number of samples, 24 sampling locations were laid out between Sta 133+33 and 147+73. The initial location was selected by generating a random number between 1 and 100 and adding it to Sta 133+00. Subsequent locations were spaced at a constant interval of 60 feet to Sta 147+73. Samples were collected at three depths in each boring: 0.5 to 3.0 feet, 3.0 to 5.5 feet, and 5.5 to 8.0 feet. Using a random number table, one sample was selected for analysis from each boring. The remaining samples were preserved for later analysis if it was assessed that additional samples were required to obtain a statistically accurate representation of the soil mass.

### 2.2.2 Sampling Analysis

Each sample selected for analysis was subjected to the WET procedure. STLC analyses for lead and copper were performed on the extract. In addition, one-half of the samples analyzed for lead and copper were selected at random for TCLP analyses. Results of the STLC analyses are given in Tables 2-1 and 2-5 and the results of the TCLP analyses are given in Table 2-1.

In addition to the above analyses, reactivity and acute aquatic toxicity analyses were performed on the same samples that were analyzed for lead and copper. The purpose of performing these analyses was to support soil reclassification under Section 66260.200(F), Title 22, of the California Code of Regulations, had such reclassification become necessary based on the results of the statistical analyses of the lead and copper data obtained. The results of these analyses are included in Table 2-4 (reactivity) and Appendix A (acute aquatic toxicity).

### 2.2.3 Discussion of Analytical Results of Metals

#### 2.2.3.1 Mercury

Sixty-seven samples were analyzed for total mercury. Although 32 exceeded 10 times the STLC and 2 exceeded the TTLC, results of 8 STLC analyses indicated low to nondetectable concentrations of soluble mercury. Samples were selected for STLC analysis based on detected total mercury concentrations greater than 10 times the STLC and, in one case, a total concentration greater than 10 times the TTLC. STLC analyses were performed on samples with 3 of the highest 5 total mercury results reported. One STLC result for mercury is considered erroneous in that the soluble concentration of 6 mg/l virtually identical to the total concentration in the sample of 6.1 mg/kg. Given the 10 times dilution factor incurred in the WET procedure, this is not considered to be a valid result. Because of the low to nondetectable concentrations of soluble mercury present in the river channel soil, mercury is not considered a constituent of concern.

### 2.2.3.2 Nickel

One hundred six samples were analyzed for total nickel. Of these 106 only 12 were greater than or equal to 10 times the STLC. Of those 12, four were randomly selected and analyzed for soluble nickel. The results of all these analyses were below the STLC for nickel. Based on these results, nickel is not considered to be a constituent of concern in the river channel soil.

### 2.2.3.3 Copper and Lead

Because 50% of the samples analyzed for soluble copper and 40% of the samples analyzed for soluble lead from the area between Sta 134+00 and 148+00 in March, April, and November 1993, exceed their respective STLCs, copper and lead were considered to be constituents of concern in that area. As described above, additional sampling, consistent with the procedures set forth in SW846, was performed between Sta 134+00 and 148+00 in April 1994. The STLC results from analysis of the samples collected were evaluated by the statistical method presented in SW846. A description of the method and the equations used are included in Appendix B. The method entails calculation of the mean concentration value for each metal and the confidence interval (CI). The upper limit of the CI is compared to an established regulatory threshold value. If the calculated upper CI value exceeds the threshold value, then the material falls within that regulatory classification.

The chemical analytical results and the statistical analyses are given in Tables 2-1 and 2-5, respectively. The results of these analyses indicate that, for copper, the upper CI of 3.55 is less than the regulatory threshold (the STLC) of 25 mg/l. Therefore, the soil in the river channel is not considered a hazardous waste by virtue of its copper content. Likewise, for lead, the upper CI of 3.76 mg/l, is below the regulatory threshold of 5.0 mg/l, the STLC for lead. Therefore, the soil in the river channel is not considered a hazardous waste by virtue of its lead content.

Even though the soil within the river channel does not classify as a hazardous waste the possibility that it constitutes a designated waste was considered. WET analyses of soil from the river channel were performed using deionized water as an extraction media. Samples selected for DI WET analysis were selected so that they covered a wide range of detected total concentrations. While the vast majority were selected from samples with total concentrations that exceed 10 times the STLC, a few that did not exceed 10 times the STLC were also analyzed. Five samples were analyzed for soluble copper and 17 samples were analyzed for soluble lead using the WET deionized (DI) method. The results of these analyses are given in Table 2-1. The DI WET results were then compared with the designated level criteria set in the Soil Management Plan dated September 1994. Detections of copper ranged from 0.021 mg/l to 0.16 mg/l, well below the designated level criteria for copper of 10 mg/l. Of the 17 samples in Reach 3 analyzed for soluble lead, there were only two detections, 0.33 mg/l and 0.15 mg/l, again, well below the designated level criteria for lead of 0.75 mg/l.

### 2.2.3.4 Analysis of Cumulative Affects

The cumulative affect of multiple metals constituents coexisting within the river channel soil was considered. To conservatively evaluate whether the soil constitutes a designated waste by virtue of the coexistence of multiple metals constituents, the highest DI WET concentrations detected in the Reach 3 river channel for mercury (0.012 μg/l), nickel (0.01 μg/l[1]), lead (0.33 μg/l), and copper (0.16 μg/l) were factored into the relationship

$$\sum_{i=1}^{n} \frac{(\text{Concentration of Constituent})}{(\text{Designated Level for Constituent})} > 1.0.$$

The result obtained using this conservative approach (0.47) is less than 1.0 and indicates that the cumulative affect of multiple metals constituents present does not cause the soil in the Reach 3 river channel to be classified as designated material.

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[1] The concentration presented for nickel represents one-half of the detection limit, since nickel was not detected in the extract from the DI WET test.

# 3.0 Soil Classification in the River Channel in Construction Reach 3

## 3.1 Soil Classification Criteria

In this subsection, soil classification criteria previously presented in the Soil Management Plan, Construction Reach 3, dated September 1994, are applied to soil within the river channel in Reach 3. These criteria are summarized in Table 3-1. A summary of the methodology and criteria used to classify the soil is shown on a flow chart on Figure 3-1.

### 3.1.1 Hazardous Waste

Metals were not detected in any soil samples with the exception of two mercury occurrences, exceeding the TTLC. Many samples, however, had elevated metal concentrations and were analyzed using the procedures as specified in Title 22 Appendix II CCR and the statistical analysis procedures presented in SW846.

Based on the chemical analytical data on samples obtained from the Reach 3 river channel, and statistical analyses performed on those data as previously described,the soil within the Reach 3 river channel does not constitute a hazardous waste relative to the criteria outlined in Table 3-1. In support of this conclusion, the results of all acute aquatic toxicity analyses performed indicated a 100% survivability rate and the result of all reactivity tests performed were below detection limits.

### 3.1.2 Designated Material

The Designated Level Methodology for Waste Classification and Cleanup Level Determination, published by the California Regional Water Quality Control Board, Central Valley Region was described in the SMP. As discussed in the SMP, TPH-g/BTEX, TPH-d, VOCs, SVOCs, and pesticides and PCBs are not considered constituents of concern and are not discussed further. Based on results of samples analyzed for soluble concentrations of metals in the Reach 3 river channel using the WET (DI) procedure, the soil within the river channel does not classify as a designated waste relative to the criteria outlined in Table 3-1.

### 3.1.3 Inert Material

Based on the WET analyses performed to date, and analytical results obtained from the sampling program, relative to the criteria outlined in Table 3-1, the soil within the river channel classifies as an inert waste, and, carries no disposal restrictions.

# 4.0 Proposed Soil Management

## 4.1 Soil Management Options

Based on the proposed criteria, the following soil management option is considered appropriate for soil excavated from Areas 7, 9, 10, 11, 14, and 22 in Reach 3:

- Standard disposal for nonhazardous inert material.

Standard disposal applies to soil classified as nonhazardous, with no special handling required. This option allows the flood control project construction contractor to dispose or reuse the soil without special requirements.

In the event hazardous levels of contaminants are detected during the Corps' construction activities, an on-call emergency response contractor will be mobilized to properly remove and dispose of the material.

## 4.2 Specification Language

As previously stated, the District will remove soil classified as hazardous waste before construction begins. Project specifications, therefore, will address nonhazardous inert waste only.

# TABLES

## Table 1-1
## Reach 3 River Channel and Assimilated Areas
## Guadalupe River Project

| Reach | Area No. | Owner/Operator | Known Soil Contaminants |
|---|---|---|---|
| 3 | 7 | PG&E | Lead |
| 3 | 9 | Southern Pacific Transportation Co. | Lead, PNAs, TRPH |
| 3 | 10 | SCVWD | Lead, TRPH |
| 3 | 11 | PG&E | TRPH, Metals |
| 3 | 14 | City of San Jose | TRPH, Lead, Copper |
| 3 | 22 | Guadalupe River Sediments | Metals |

Note:
History of site investigation activities relative to the areas identified above are summarized in the Soil Management Plan for Reach 3, dated September 1994.

# Table 2-1
# Summary of Inorganic Analytical Results - Reach 3
# Guadalupe River Project

| Sample ID | Station | Area | Sample Depth | Sample Matrix | Units | Date Sampled | Sb | As | Ba | Be | Cd | Cr | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | V | Zn | pH | Cu TCLP | Cu WET (Acid) | Cu WET (DI) | Hg WET | Hg WET (DI) | Ni WET | Ni WET (DI) | Pb WET (Acid) | Pb WET (DI) | Pb TCLP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS-22-17B | 119 + 30 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | 3 | * | 110 | 1 | * | 64 | * | 34 | 41 | 1.7 | * | 100 | * | * | 19 | 37 | 110 | | | | | | | | | | | |
| | | | (C&T) | soil | mg/kg | 3/16/93 | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS-22-18B | 119 + 96 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 35 | 54 | 3.4 | | 85 | | | | | | | | | | | | | | | | |
| SS-7-1 | 119 + 98 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 5 | 6.4 | 120 | 1 | * | 66 | * | 24 | 17 | 2.7 | * | 87 | * | * | 27 | 45 | 100 | | | | | | | | | | | |
| SS-22-18C | 120 + 18 | 22 | 4 - 4.5 | soil | mg/kg | 3/31/93 | 6 | 14 | 160 | 1 | * | 130 | * | 38 | 27 | 4.5 | * | 180 | * | * | 28 | 64 | 120 | | | | | | | | | | | |
| | | | (C&T) | soil | mg/kg | 3/31/93 | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 3/31/93 | 8 | 16 | 150 | 1 | * | 160 | * | 26 | 10 | 0.36 | * | 270 | * | * | 55 | 56 | 60 | | | | | | | | | | | |
| SS-22-18CR | 120 + 18 | 22 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | | | | 68 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | | | | * | | | |
| | | | 4 - 4.5 | soil | mg/kg | 11/4/93 | | | | | | | | | | 4.1 | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | * | 0.012 | | | | | |
| SS-22-18A | 120 + 27 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 31 | 56 | 5.9 | | 100 | | | | | | | | | | | | | | | | |
| SS-7-2 | 120 + 48 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | * | * | 120 | 1 | * | 91 | * | 40 | 54 | 2.6 | * | 100 | * | * | 26 | 55 | 190 | | | | | | | | | | | |
| | | | (C&T) | soil | mg/kg | 3/31/93 | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS-22-19 | 121 + 08 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 35 | 60 | 4 | | 92 | | | | | | | | | | | | | | | | |
| SS-7-3 | 121 + 24 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 5 | 19 | 130 | 1 | * | 46 | 1 | 42 | 86 | 1.1 | * | 64 | * | * | 18 | 38 | 460 | | | | | | | | | | | |
| | | | | extract | mg/l | 3/31/93 | | | | | | | | | | | | | | | | | | | | | | | | | | | * | |
| SS-7-3R | 121 + 24 | 7 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | 78 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 5.4 | * | |
| SS-22-21 | 121 + 49 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 35 | 100 | 3.2 | | 96 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/4/93 | | | | | | | | | | | | | | | | | | | | | | * | | | | 3.3 | | |
| SS-22-21R | 121 + 49 | 22 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | 76 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 2.3 | 0.33 | |
| SS-22-22 | 122 + 34 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 17 | 9 | * | | 39 | | | | | | | | | | | | | | | | |
| SS-7-4 | 122 + 78 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 9 | * | 120 | 1 | * | 53 | * | 23 | 6 | 1.7 | * | 67 | * | * | 18 | 43 | 61 | | | | | | | | | | | |
| SS-22-20 | 122 + 95 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 69 | 64 | 1.5 | | 52 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/4/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| SS-22-22A | 123 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | * | 91 | 1 | * | 49 | * | 22 | 34 | 3.5 | * | 62 | * | * | 7 | 34 | 65 | | | | | | | | | | | |
| SS-7-5 | 123 + 12 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 6 | * | 120 | 1 | * | 49 | * | 22 | 3 | 0.7 | * | 55 | * | * | 18 | 44 | 58 | | | | | | | | | | | |
| SS-22-22B | 124 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | 5 | 6.5 | 120 | 1 | * | 68 | * | 28 | 20 | 1.6 | * | 97 | * | * | 25 | 47 | 62 | | | | | | | | | | | |
| SS-22-23 | 124 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 35 | 71 | 6.5 | | 76 | | | | | | | | | | | | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 42 | * | 630 | 13 | * | * | * | 65 | 21 | 0.4 | 8 | 120 | * | * | 10 | 37 | 65 | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 58 | * | 380 | 10 | 1 | 17 | 2 | 71 | 38 | 1.2 | 12 | 100 | * | * | 45 | 33 | 75 | | | | | | | | | | | |
| SS-22-23R | 124 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | 89 | 2.6 | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | * | * | | | 2.8 | 0.15 | |
| SS-22-23A | 124 + 80 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | 3 | * | 100 | 1 | * | 1.1 | * | 30 | 59 | 1.8 | * | 79 | * | * | 10 | 40 | 91 | | | | | | | | | | | |
| SS-22-24 | 126 + 20 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 23 | 46 | 3.2 | | 51 | | | | | | | | | | | | | | | | |
| SS-22-24A | 128 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | 4 | 5.2 | 95 | 1 | * | 56 | * | 100 | 55 | 1.2 | * | 74 | * | * | 14 | 41 | 100 | | | | | | | | | | | |
| SS-22-25 | 130 + 30 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 16 | 7 | 0.05 | | 79 | | | | | | | | | | | | | | | | |
| SS-22-26 | 130 + 75 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | | | | | | | | 47 | 67 | 3.4 | | 68 | | | | | | | | | | | | | | | | |
| SS-11-1 | 131 + 30 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 16 | 7 | | | 37 | | | | | | | | | | | | | | | | |
| SS-22-27 | 131 + 52 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 58 | 82 | 0.8 | | 31 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | * | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 29 | 7 | 280 | * | * | 33 | 2 | 55 | 21 | 1.7 | 12 | 130 | * | * | 23 | 33 | 67 | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 56 | 6.4 | 210 | * | 3 | * | 4 | 65 | 10 | 0.46 | 12 | 95 | * | * | 42 | 26 | 53 | | | | | | | | | | | |
| SS-21 | 131 + 65 | 11 | 1.5 - 1.8 | soil | mg/kg | 4/12/91 | * | 6 | 150 | 0.6 | 0.7 | 69 | 11 | 34 | 100 | | * | 66 | * | * | * | 43 | 190 | 8.23 | | | | | | | | | | |
| SS-11-2 | 131 + 70 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 26 | 120 | | | 64 | | | | | | | | | | | | | | | | |
| SS-11-2R | 131 + 70 | 11 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | 160 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 9.7 | * | |
| SS-11-3 | 132 + 30 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 41 | 77 | 3.4 | | 81 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 5.7 | * | |
| SS-22-28 | 132 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 61 | 68 | 14.6 | | 90 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | | | 0.005 | | | | | | |
| SS-22-28R | 132 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | | 49 | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | 0.0024 | * | | | | | |
| GR-SB-1 | 133 + 30 | 22 | 0.5 - 3 | extract | mg/l | 4/4/94 | | | | | | | | | | | | | | | | | | | * | 0.6 | | | | | | 1.5 | | * |
| SS-22-29 | 133 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 56 | 64 | 4.7 | | 59 | | | | | | | | | | | | | | | | |
| GR-SB-2 | 133 + 90 | 22 | 0.5 - 3 | extract | mg/l | 4/4/94 | | | | | | | | | | | | | | | | | | | | 0.5 | | | | | | 1.1 | | |
| GR-SB-3 | 134 + 50 | 22 | 3 - 5.5 | extract | mg/l | 4/4/94 | | | | | | | | | | | | | | | | | | | * | 0.3 | | | | | | 0.3 | | * |
| SS-22-30 | 135 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 40 | 54 | 8.3 | | 46 | | | | | | | | | | | | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 40 | 11 | 680 | * | * | 42 | 3 | 850 | 140 | 4.2 | * | 310 | * | 1 | 39 | 35 | 390 | | | | | | | | | | | |
| | | | | extract | mg/l | 4/2/93 | | | | | | | | | | | | | | | | | | | | | 0.08 | * | | | | | | |
| SS-22-30R | 135 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | | 0.75 | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | | | | | | | | | | | | | | | | | | | | | | | | * | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 11/5/93 | | | | | | | | 170 | 130 | | | 98 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | 0.053 | 0.053 | | | | * | 6.7 | * | |
| GR-SB-4 | 135 + 10 | 22 | 0.5 - 3 | extract | mg/l | 4/4/94 | | | | | | | | | | | | | | | | | | | | 0.7 | | | | | | 2.4 | | |
| GR-SB-5 | 135 + 70 | 22 | 3 - 5.5 | extract | mg/l | 4/4/94 | | | | | | | | | | | | | | | | | | | * | 0.7 | | | | | | 5.4 | | * |
| GR-SB-6 | 136 + 30 | 22 | 3 - 5.5 | extract | mg/l | 4/4/94 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | 2.3 | | |
| SS-22-31 | 136 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 12 | 11 | 10.9 | | 45 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | | | * | | | | | | |
| SS-22-31R | 136 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | | | 1.6 | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | | | | * | | | | | |
| GR-SB-7 | 136 + 90 | 22 | 3 - 5.5 | extract | mg/l | 4/5/94 | | | | | | | | | | | | | | | | | | | * | 4.5 | | | | | | 1.1 | | * |

## Table 2-1
## Summary of Inorganic Analytical Results - Reach 3
## Guadalupe River Project

| Sample ID | Station | Area | Sample Depth | Sample Matrix | Units | Date Sampled | Sb | As | Ba | Be | Cd | Cr | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | V | Zn | pH | Cu TCLP | Cu WET (Acid) | Cu WET (DI) | Hg WET | Hg WET (DI) | Ni WET | Ni WET (DI) | Pb WET (Acid) | Pb WET (DI) | Pb TCLP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-8 | 137 + 50 | 22 | 0.5 - 3 | extract | mg/l | 4/5/94 | | | | | | | | | | | | | | | | | | | | 0.1 | | | | | | 0.1 | | |
| SS-22-31A | 137 + 70 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | * | 100 | 1 | * | 36 | * | 27 | 28 | 0.42 | * | 47 | * | * | 13 | 34 | 80 | | | | | | | | | | | |
| GR-SB-9 | 138 + 10 | 22 | 0.5 - 3 | extract | mg/l | 4/5/94 | | | | | | | | | | | | | | | | | | | * | 0.2 | | | | | | 1 | | * |
| SS-22-31B | 138 + 45 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | 3 | * | 97 | 1 | * | 76 | * | 70 | 53 | 1.9 | * | 120 | * | * | 22 | 40 | 92 | | | | | | | | | | | |
| GR-SB-10 | 138 + 70 | 22 | 0.5 - 3 | extract | mg/l | 4/5/94 | | | | | | | | | | | | | | | | | | | | 0.2 | | | | | | 1.8 | | |
| SS-22-32 | 139 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 140 | 73 | 4.5 | | 91 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | * | |
| GR-SB-11 | 139 + 30 | 22 | 5.5 - 8 | extract | mg/l | 4/5/94 | | | | | | | | | | | | | | | | | | | * | 0.3 | | | | | | 0.3 | | * |
| SS-22-33 | 139 + 85 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | 2 | | | | | | 280 | 150 | 2.1 | | 70 | * | | * | | | | | | | | | | | | | |
| | | | (A) | soil | mg/kg | 3/5/93 | * | | 135 | * | * | 88.6 | * | 124 | 330 | 1.3 | * | 124 | | * | | 44.9 | 204 | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | 9.4 | | | | | | | | |
| | | | 3 - 4 | soil | mg/kg | 3/17/93 | 7 | 8.1 | 130 | 1 | * | 91 | 1 | 650 | 170 | 1.1 | * | 130 | * | * | 34 | 47 | 200 | | | | | | | | | | | |
| SS-22-33R | 139 + 85 | 22 | 3 - 4 | soil | mg/kg | 11/4/93 | | | | | | | | 700 | 370 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | 71 | 0.13 | | | | | 22 | * | |
| GR-SB-12 | 139 + 90 | 22 | 0.5 - 3 | extract | mg/l | 4/5/94 | | | | | | | | | | | | | | | | | | | | 0.4 | | | | | | 0.7 | | |
| GR-SB-13 | 140 + 50 | 22 | 0.5 - 3 | extract | mg/l | 4/5/94 | | | | | | | | | | | | | | | | | | | 0.5 | 25 | | | | | | 10 | | * |
| SS-22-34 | 140 + 60 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 800 | 55 | 0.5 | | 52 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | 100 | 0.16 | | | | | | | |
| | | | 2.5 - 3.5 | soil | mg/kg | 3/17/93 | * | * | 130 | 1 | * | 85 | * | 7.1 | 140 | 1.7 | * | 90 | * | * | * | 45 | 160 | | | | | | | | | | | |
| GR-SB-14 | 141 + 10 | 22 | 5.5 - 8 | extract | mg/l | 4/6/94 | | | | | | | | | | | | | | | | | | | | 7.8 | | | | | | 9.8 | | |
| SS-22-35 | 141 + 55 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | | | | | | | | 250 | 120 | 0.7 | | 73 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/5/93 | | | | | | | | | | | | | | | | | | | | 6.3 | | | | | | | | |
| | | | 2.5 - 3 | soil | mg/kg | 3/17/93 | 10 | 14 | 150 | 1 | * | 68 | 1 | 100 | 78 | 1.4 | * | 75 | * | * | 14 | 47 | 100 | | | | | | | | | | | |
| | | | 6.5 - 7 | soil | mg/kg | 3/17/93 | 6 | 6.4 | 230 | 1 | * | 90 | * | 38 | 10 | 0.39 | * | 120 | * | * | 23 | 67 | 76 | | | | | | | | | | | |
| | | | (C&T) | soil | mg/kg | 3/17/93 | | * | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GR-SB-15 | 141 + 70 | 22 | 5.5 - 8 | extract | mg/l | 4/7/94 | | | | | | | | | | | | | | | | | | | * | 2.1 | | | | | | 12 | | * |
| SS-14-1 | 142 + 05 | 14 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 280 | 94 | | | 110 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/8/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 | | |
| SS-14-1R | 142 + 05 | 14 | 0.5 - 1 | soil | mg/kg | 11/4/93 | | | | | | | | 640 | | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/4/93 | | | | | | | | | | | | | | | | | | | | 37 | 0.021 | | | | | | | |
| SS-14-2 | 142 + 20 | 14 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 54 | 89 | | | 140 | | | | | | | | | | | | | | | | |
| SS-22-36 | 142 + 30 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 31 | 70 | | | 110 | | | | | | | | | | | | | | | | |
| GR-SB-16 | 142 + 30 | 22 | 5.5 - 8 | extract | mg/l | 4/6/94 | | | | | | | | | | | | | | | | | | | | 1.5 | | | | | | 5.6 | | |
| GR-SB-17 | 142 + 90 | 22 | 0.5 - 3 | extract | mg/l | 4/6/94 | | | | | | | | | | | | | | | | | | | * | 0.7 | | | | | | 2.6 | | * |
| SS-22-37 | 143 + 35 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 32 | 51 | | | 58 | | | | | | | | | | | | | | | | |
| GR-SB-18 | 143 + 50 | 22 | 3 - 5.5 | extract | mg/l | 4/6/94 | | | | | | | | | | | | | | | | | | | | 1.5 | | | | | | 2.9 | | |
| SS-22-38 | 144 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 41 | 52 | | | 160 | | | | | | | | | | | | | | | | |
| SS-22-38A | 144 + 10 | 22 | 4 - 4.5 | soil | mg/kg | 4/2/93 | 40 | 6.4 | 630 | 4 | * | * | 4 | 140 | 160 | 1.1 | * | 110 | * | * | 38 | 36 | 140 | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 42 | 7.3 | 470 | * | * | * | 3 | 79 | 130 | 2.8 | * | 150 | * | * | 45 | 22 | 140 | | | | | | | | | | | |
| GR-SB-19 | 144 + 10 | 22 | 3 - 5.5 | extract | mg/l | 4/7/94 | | | | | | | | | | | | | | | | | | | * | 0.3 | | | | | | 0.7 | | * |
| SS-15 | 144 + 42 | 22 | 0.2 - 0.5 | soil | mg/kg | 4/12/91 | * | 3.3 | 93 | 0.4 | 0.5 | 70 | 12 | 28 | 65 | 1.1 | 0.8 | 110 | * | * | * | 30 | 86 | 7.78 | | | | | | | | | | |
| | | | | extract | mg/l | 4/12/91 | | | | | | | | | | | | | | | | | | | | | | | | | | 3.81 | | |
| GR-SB-20 | 144 + 70 | 22 | 3 - 5.5 | extract | mg/l | 4/7/94 | | | | | | | | | | | | | | | | | | | | 1.5 | | | | | | 1.9 | | |
| SS-22-39 | 145 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 97 | 120 | | | 140 | | | | | | | | | | | | | | | | |
| SS-22-39R | 145 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 11/5/93 | | | | | | | | | 100 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 4.9 | * | |
| GR-SB-21 | 145 + 30 | 22 | 5.5 - 8 | extract | mg/l | 4/7/94 | | | | | | | | | | | | | | | | | | | * | 0.8 | | | | | | 2.9 | | * |
| GR-SB-22 | 145 + 90 | 22 | 3 - 5.5 | extract | mg/l | 4/7/94 | | | | | | | | | | | | | | | | | | | | 0.3 | | | | | | 0.2 | | |
| SS-22-40 | 146 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 40 | 120 | | | 140 | | | | | | | | | | | | | | | | |
| GR-SB-23 | 146 + 50 | 22 | 0.5 - 3 | extract | mg/l | 4/7/94 | | | | | | | | | | | | | | | | | | | * | 0.3 | | | | | | 0.8 | | * |
| SS-28 | 146 + 60 | 22 | 1 - 2 | soil | mg/kg | 6/26/91 | 4.7 | 12.9 | 134 | 0.2 | 1 | 46.2 | 11.1 | 34.2 | 73.8 | 3.97 | * | 75.6 | 0.27 | 0.3 | * | 33.7 | 114 | 7.85 | | | | | | | | | | |
| | | | | extract | mg/l | 6/26/91 | | | | | | | | | | | | | | | | | | | | | | * | | | | 2.4 | | |
| SS-22-41 | 146 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 50 | 190 | | | 160 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/19/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 13 | | |
| | | | 3 - 4 | soil | mg/kg | 3/17/93 | * | 7.8 | 88 | 1 | * | 160 | 1 | 32 | 41 | 2 | * | 180 | * | * | 23 | 64 | 300 | | | | | | | | | | | |
| | | | 5 - 5.5 | soil | mg/kg | 3/17/93 | 5 | * | 110 | 1 | * | 55 | * | 29 | * | 0.28 | * | 64 | * | * | 4 | 53 | 69 | | | | | | | | | | | |
| SS-22-41R | 146 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 11/5/93 | | | | | | | | | 100 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 2.9 | * | |
| GR-SB-24 | 147 + 10 | 22 | 0.5 - 3 | extract | mg/l | 4/7/94 | | | | | | | | | | | | | | | | | | | | 0.5 | | | | | | 1.4 | | |
| SS-22-42 | 149 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 30 | 50 | | | 96 | | | | | | | | | | | | | | | | |
| SS-22-43 | 151 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 32 | 82 | | | 150 | | | | | | | | | | | | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 40 | 22 | 560 | * | * | 50 | 2 | 82 | 13 | 6.5 | * | 330 | * | * | 27.5 | 35 | 74 | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 24 | * | 360 | * | * | * | 1 | 74 | 52 | 0.23 | * | 99 | 15 | * | 23 | 31 | 59 | | | | | | | | | | | |
| SS-22-43R | 151 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 11/5/93 | | | | | | | | | 67 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 2.7 | * | |
| | | | 4 - 4.5 | soil | mg/kg | 11/5/93 | | | | | | | | | | 0.62 | | 47 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | | | | * | | * | | | |
| SS-22-44 | 153 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 38 | 66 | | | 190 | | | | | | | | | | | | | | | | |
| SS-22-45 | 155 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 35 | 43 | | | 170 | | | | | | | | | | | | | | | | |
| SS-22-46 | 155 + 60 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 33 | 50 | | | 170 | | | | | | | | | | | | | | | | |
| SS-22-47 | 156 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | | | | | | | | 35 | 66 | | | 160 | | | | | | | | | | | | | | | | |

## Table 2-1
## Summary of Inorganic Analytical Results - Reach 3
## Guadalupe River Project

| Sample ID | Station | Area | Sample Depth | Sample Matrix | Units | Date Sampled | Sb | As | Ba | Be | Cd | Cr | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | V | Zn | pH | Cu TCLP | Cu WET (Acid) | Cu WET (DI) | Hg WET | Hg WET (DI) | Ni WET | Ni WET (DI) | Pb WET (Acid) | Pb WET (DI) | Pb TCLP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS-22-48 | 156 + 54 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 37 | 86 | | | 170 | | | | | | | | | | | | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 45 | 13 | 590 | 4 | * | 25 | 3 | 110 | 29 | 8 | * | 430 | * | * | * | 41 | 84 | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 32 | 11 | 280 | * | * | * | 3 | 63 | 25 | 12 | * | 380 | * | * | 41 | 38 | 84 | | | | | | | | | | | |
| | | | (C&T) | soil | mg/kg | 4/2/93 | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS-22-48R | 156 + 54 | 22 | 0.5 - 1 | soil | mg/kg | 11/5/93 | | | | | | | | | 86 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | * | |
| | | | 4 - 4.5 | soil | mg/kg | 11/5/93 | | | | | | | | | | | | 270 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | | | | | 5.3 | * | | | |
| | | | 7.5 - 8 | soil | mg/kg | 11/5/93 | | | | | | | | | | ▨ 22 | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/5/93 | | | | | | | | | | | | | | | | | | | | | | | * | | | | | |
| SS-22-49 | 157 + 82 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 34 | 69 | | | 150 | | | | | | | | | | | | | | | | |
| SS-22-50 | 160 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 36 | 120 | | | 150 | | | | | | | | | | | | | | | | |
| | | | 3 - 4 | soil | mg/kg | 3/17/93 | 7 | 6.1 | 150 | 1 | * | 61 | * | 23 | 9 | 0.3 | * | 79 | * | * | 13 | 54 | 54 | | | | | | | | | | | |
| | | | (C&T) | soil | mg/kg | 3/17/93 | | * | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 7 - 8 | soil | mg/kg | 3/17/93 | 4 | * | 100 | 1 | * | 60 | * | 14 | 4 | 0.11 | * | 51 | * | * | 8 | 49 | 35 | | | | | | | | | | | |
| | | | (C&T) | soil | mg/kg | 3/17/93 | | * | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS-22-50R | 160 + 00 | 22 | 1 - 1.5 | soil | mg/kg | 11/08/93 | | | | | | | | | 64 | | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | * | |
| SS-22-51 | 162 + 80 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 43 | 200 | | | 120 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/19/93 | | | | | | | | | | | | | | | | | | | | | | | | | | * | | |
| SS-22-52 | 163 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 160 | 85 | | | 330 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/9/93 | | | | | | | | | | | | | | | | | | | | | | | | 1.4 | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 50 | * | 530 | * | * | 58 | 5 | 83 | 65 | 1.1 | * | 200 | * | * | 19 | 36 | 87 | | | | | | | | | | | |
| SS-22-52R | 163 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 11/08/93 | | | | | | | | | 48 | | | 140 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | | | | | | | | | | | | | | | | | | | | | | | | | | * | | * | |
| SS-22-53 | 164 + 95 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 37 | 21 | | | 140 | | | | | | | | | | | | | | | | |
| SS-22-54 | 166 + 35 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 36 | 54 | | | 170 | | | | | | | | | | | | | | | | |
| SS-22-54A | 166 + 75 | 22 | 4 - 4.5 | soil | mg/kg | 4/2/93 | 79 | 21 | 600 | 8 | * | * | 1 | 89 | 29 | 5 | * | 720 | * | * | 32 | 43 | 80 | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 53 | 11 | 400 | 12 | * | * | 3 | 72 | 56 | 6 | * | 460 | * | * | 31 | 35 | 60 | | | | | | | | | | | |
| SS-22-54AR | 166 + 75 | 22 | 4 - 4.5 | soil | mg/kg | 11/08/93 | | | | | | | | | | | | 560 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/08/93 | | | | | | | | | | | | | | | | | | | | | | | | 9 | * | | | |
| | | | 7.5 - 8 | soil | mg/kg | 11/08/93 | | | | | | | | | | 6.1 | | | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 11/08/93 | | | | | | | | | | | | | | | | | | | | | | 6 | * | | | | | |
| SS-22-55 | 167 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 34 | 44 | | | 120 | | | | | | | | | | | | | | | | |
| SS-22-56 | 169 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 24 | 22 | | | 98 | | | | | | | | | | | | | | | | |
| SS-22-57 | 170 + 55 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | | | | | | | | 30 | 27 | | | 91 | | | | | | | | | | | | | | | | |
| SS-22-58 | 190 + 25 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | | | | | | | | 32 | 10 | | | 68 | | | | | | | | | | | | | | | | |
| SS-22-59 | 192 + 20 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | | | | | | | | 36 | 58 | | | 170 | | | | | | | | | | | | | | | | |
| SS-22-60 | 194 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | | | | | | | | 41 | 16 | | | 150 | | | | | | | | | | | | | | | | |
| SS-22-61 | 197 + 55 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | | | | | | | | 50 | 35 | | | 110 | | | | | | | | | | | | | | | | |
| SS-22-62 | 200 + 15 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | | | | | | | | 31 | 59 | | | 150 | | | | | | | | | | | | | | | | |
| | | | | extract | mg/l | 3/19/93 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| TTLC Standard | | | | | mg/kg | | 500 | 500 | 10000 | 75 | 100 | 2500 | 8000 | 2500 | 1000 | 20 | 3500 | 2000 | 100 | 500 | 700 | 2400 | 5000 | 2 < pH > 12.5 | | | | | | | | | | |
| STLC Standard | | | | | mg/l | | 15 | 5 | 100 | 0.75 | 1 | 560 | 80 | 25 | 5 | 0.2 | 350 | 20 | 1 | 5 | 7 | 24 | 250 | | | 25 | | 0.2 | | 20 | | 5 | | |
| 10 times STLC | | | | | mg/l | | 150 | 50 | 1000 | 7.5 | 10 | 5600 | 800 | 250 | 50 | 2 | 3500 | 200 | 10 | 50 | 70 | 240 | 2500 | | | | | | | | | | | |
| TCLP | | | | | mg/l | | + | 5 | 100 | + | 1 | 5 | + | + | 5 | 0.2 | + | + | 1 | 5 | + | + | + | | | | | | | | | | | 5 |
| California Primary MCL | | | | | mg/l | | 0.006** | 0.05 | 1 | 0.004++ | 0.005** | 0.05 | 0.050++ | 1.3** | 0.015** | 0.002 | 0.010++ | 0.1** | 0.01 | 0.05 | 0.002** | 0.020++ | 5 | | | | | | | | | | | |
| Designated Level | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | | 0.1 | | 5 | | 0.75 | |

▨ Exceeds TTLC or STLC standard
* Non detect
(A) Anametrix, Inc. lab results.
(C&T) Curtis & Tompkins lab results.

WET (acid) Waste extraction test using an acid extractant.
WET (DI) Waste extraction test using deionized water extractant.
+ Not established
** EPA MCL
++ RWQCB Water Quality Goal

Sample locations are shown on Figure 2-1.

### Table 2-2
### Summary of Volatile Analytical Results - Reach 3
### Guadalupe River Project

| Sample ID | Station | Area | Sample Depth | Sample Matrix | Units | Date Sampled | EPA Method 418.1 TRPH | EPA Method 8015 | | | | | | EPA Method 8240 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TPH-diesel | TPH-gasoline | benzene | toluene | ethyl-benzene | total xylenes | acetone | benzene | chloroform | ethyl-benzene | methylene chloride | tetrachlo-roethane | toluene | trichloro-fluoromethane |
| SS-22-17B | 119 + 30 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | | | | | | | | | | | | | | |
| SS-22-18B | 119 + 96 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | | | | | | | | |
| SS-7-1 | 119 + 98 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 24 | | | | | | | | | | | | | | |
| SS-22-18C | 120 + 18 | 22 | 4 - 4.5 | soil | mg/kg | 3/31/93 | 27 | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 3/31/93 | 24 | | | | | | | | | | | | | | |
| SS-22-18A | 120 + 27 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | | | | | | | | |
| SS-7-2 | 120 + 48 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 77 | | | | | | | | | | | | | | |
| SS-22-19 | 121 + 8 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | | | | | | | | |
| SS-7-3 | 121 + 24 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 44 | | | | | | | | | | | | | | |
| SS-22-21 | 121 + 49 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | * | * | * | | | | | | | | |
| SS-22-22 | 122 + 34 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | * | * | * | | | | | | | | |
| SS-7-4 | 122 + 78 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 43 | | | | | | | | | | | | | | |
| SS-22-20 | 122 + 95 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | | | | | | | | |
| SS-22-22A | 123 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | | | | | | | | | | | | | | |
| SS-7-5 | 123 + 12 | 7 | 0.5 - 1 | soil | mg/kg | 3/31/93 | 38 | | | | | | | | | | | | | | |
| SS-22-22B | 124 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | | | | | | | | | | | | | | |
| SS-22-23 | 124 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | | | | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 3.8 | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 51 | | | | | | | | | | | | | | |
| SS-22-23A | 124 + 80 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | | | | | | | | | | | | | | |
| SB-9-1 | 125 + 0 | 9 | 3 - 4.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | | | | | | | | |
| | | | 8 - 9.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | | | | | | | | |
| | | | 13 - 14.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | | | | | | | | |
| | | | 18 - 19.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | | | | | | | | |
| SS-22-24 | 126 + 20 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | | | | | | | | |
| MW-9-1 | 127 + 10 | 9 | 3 - 4.5 | soil | mg/kg | 3/10/93 | 36 | * | * | * | * | * | * | | | | | | | | |
| | | | 8 - 8.5 | soil | mg/kg | 3/10/93 | 30 | * | * | * | * | * | * | | | | | | | | |
| | | | 13 - 14.5 | soil | mg/kg | 3/10/93 | 28 | * | * | * | * | * | * | | | | | | | | |
| | | | 18 - 19.5 | soil | mg/kg | 3/10/93 | 36 | * | * | * | * | * | * | | | | | | | | |
| | | | | water | mg/l | 3/15/93 | * | * | * | * | * | * | * | * | * | * | * | * | | * | |
| SS-22-24A | 128 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | | | | | | | | | | | | | | |
| MW-9-2 | 130 + 20 | 9 | 3.5 - 5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | | | | | | | | |
| | | | 8 - 9.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | | | | | | | | |
| | | | 13 - 14.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | | | | | | | | |
| | | | | water | mg/l | 3/15/93 | * | * | * | * | * | * | * | * | * | * | * | * | | * | |
| SS-22-25 | 130 + 30 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | * | * | * | * | 0.009 | | * | |
| SS-22-26 | 130 + 75 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | | | | | | * | * | * | * | 0.006 | | * | |
| SS-11-1 | 131 + 30 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 29 | * | | | | | | * | * | * | * | * | | * | |
| SS-22-27 | 131 + 52 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 29 | * | | | | | | * | * | * | * | * | | * | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 48 | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 61 | | | | | | | | | | | | | | |
| SS-21 | 131 + 65 | 11 | 1.5 - 1.8 | soil | mg/kg | 4/12/91 | 56.5 | | * | * | * | * | * | | | | | | | | |
| SS-11-2 | 131 + 70 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 32 | * | | | | | | | | | | | | | |
| SS-11-3 | 132 + 30 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 32 | * | | | | | | * | * | * | * | * | | * | |
| SS-22-28 | 132 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 26 | * | | | | | | * | * | * | * | * | | * | |
| SS-22-29 | 133 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 31 | * | | | | | | * | * | * | * | * | | * | |
| SS-22-30 | 135 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 32 | * | | | | | | * | * | * | * | * | | * | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 13 | | | | | | | | | | | | | | |
| SS-22-31 | 136 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 30 | * | | | | | | * | * | * | * | * | | * | |
| SS-22-31A | 137 + 70 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | | | | | | | | | | | | | | |
| SS-22-31B | 138 + 45 | 22 | 0.5 - 1 | soil | mg/kg | 3/16/93 | * | | | | | | | | | | | | | | |
| SS-22-32 | 139 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 31 | * | | | | | | * | * | * | * | * | | * | |
| SS-22-33 | 139 + 85 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 29 | * | | | | | | * | * | * | * | * | | * | |
| | | | 3 - 4 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |

### Table 2-2
### Summary of Volatile Analytical Results - Reach 3
### Guadalupe River Project

| Sample ID | Station | Area | Sample Depth | Sample Matrix | Units | Date Sampled | EPA Method 418.1 TRPH | EPA Method 8015 | | | | | | EPA Method 8240 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | TPH-diesel | TPH-gasoline | benzene | toluene | ethyl-benzene | total xylenes | acetone | benzene | chloroform | ethyl-benzene | methylene chloride | tetrachloroethane | toluene | trichloro-fluoromethane |
| SS-22-34 | 140 + 60 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 32 | * | | | | | | | | | | | | | |
| | | | 2.5 - 3.5 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |
| SS-22-35 | 141 + 55 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | 36 | * | | | | | | * | * | * | * | * | | * | * |
| | | | 2.5 - 3 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |
| | | | 6.5 - 7 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |
| SS-22-36 | 142 + 30 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 32 | * | * | * | * | * | * | * | * | * | * | * | | * | * |
| SS-22-37 | 143 + 35 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 28 | * | * | * | * | * | * | * | * | * | * | * | | * | * |
| SS-22-38 | 144 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 25 | * | * | * | * | * | * | * | * | * | * | * | | * | * |
| SS-22-38A | 144 + 10 | 22 | 4 - 4.5 | soil | mg/kg | 4/2/93 | 96 | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 46 | | | | | | | | | | | | | | |
| SS-15 | 144 + 42 | 22 | 0.2 - 0.5 | soil | mg/kg | 4/12/91 | 54.1 | | * | * | * | * | * | | | | | | | | |
| SS-22-39 | 145 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 26 | * | * | * | * | * | * | * | * | * | * | * | | * | * |
| SS-22-40 | 146 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 31 | * | * | * | * | * | * | * | * | * | * | * | | * | * |
| SS-28 | 146 + 60 | | 1 - 2 | soil | mg/kg | 6/26/91 | 33.7 | | * | | | | | | | | | | | | |
| SS-22-41 | 146 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 34 | * | * | * | * | * | * | * | * | * | * | * | | * | * |
| | | | 3 - 4 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |
| | | | 5 - 5.5 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |
| SS-22-42 | 149 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 22 | * | | | | | | * | * | * | * | * | | * | * |
| SS-22-43 | 151 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 31 | * | | | | | | | | | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 44 | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 41 | | | | | | | | | | | | | | |
| SS-22-44 | 153 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 20 | * | | | | | | | | | | | | | |
| SS-22-45 | 155 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 20 | * | | | | | | | | | | | | | |
| SS-22-46 | 155 + 60 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 24 | * | | | | | | | | | | | | | |
| SS-22-47 | 156 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | 31 | * | | | | | | * | * | * | * | * | | * | * |
| SS-22-48 | 156 + 54 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 37 | * | | | | | | * | * | * | * | * | | * | * |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 41 | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 4.5 | | | | | | | | | | | | | | |
| SS-22-49 | 157 + 82 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 24 | * | | | | | | * | * | * | * | * | | * | * |
| SS-22-50 | 160 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 42 | * | | | | | | | | | | | | | |
| | | | 3 - 7 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |
| | | | 7 - 8 | soil | mg/kg | 3/17/93 | * | | | | | | | | | | | | | | |
| SS-22-51 | 162 + 80 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 48 | * | | | | | | | | | | | | | |
| SS-22-52 | 163 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 42 | * | | | | | | | | | | | | | |
| | | | 4 - 4.5 | soil | mg/kg | 4/2/93 | 14 | | | | | | | | | | | | | | |
| SS-22-53 | 164 + 95 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 34 | * | | | | | | | | | | | | | |
| SS-22-54 | 166 + 35 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 29 | * | | | | | | | | | | | | | |
| SS-22-54A | 166 + 75 | 22 | 4 - 4.5 | soil | mg/kg | 4/2/93 | 14 | | | | | | | | | | | | | | |
| | | | 7.5 - 8 | soil | mg/kg | 4/2/93 | 14 | | | | | | | | | | | | | | |
| SS-22-55 | 167 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 31 | * | | | | | | | | | | | | | |
| SS-22-56 | 169 + 0 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 30 | * | | | | | | | | | | | | | |
| SS-22-57 | 170 + 55 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | 28 | * | | | | | | | | | | | | | |
| SS-22-58 | 190 + 25 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | * | * | | | | | | | | | | | | | |
| SS-22-59 | 192 + 20 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | * | * | | | | | | | | | | | | | |
| SS-22-60 | 194 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | * | * | | | | | | | | | | | | | |
| SS-22-61 | 197 + 55 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | * | * | | | | | | | | | | | | | |
| SS-22-62 | 200 + 15 | 22 | 0.5 - 1 | soil | mg/kg | 3/10/93 | * | * | | | | | | | | | | | | | |

* Non detect

### Table 2-3
### Summary of Semivolatile Analytical Results (1) - Reach 3
### Guadalupe River Project

| Sample ID | Station | Area | Sample Depth | Sample Matrix | Units | Date Sampled | 2MN | ACE | ACY | ANT | BAA | BAP | BBF | BGP | BKF | B2EP | BBP | CRY | DBP | DOP | DAH | DBF | FLA | FLE | HCB | I123P | NAP | PHE | PYR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS-22-18B | 119 + 96 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-18A | 120 + 27 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | 0.55 |
| SS-22-19 | 121 + 08 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | 0.38 |
| SS-22-20 | 122 + 95 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-23 | 124 + 50 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SB-9-1 | 125 + 00 | 9 | 3 - 4.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | 8 - 9.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | 13 - 14.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | 18 - 19.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-24 | 126 + 20 | 22 | 0.5 - 1 | soil | mg/kg | 3/4/93 | * | * | * | * | 0.54 | 1.1 | 1.2 | 2.7 | 0.4 | * | * | 0.67 | * | * | * | * | 1 | * | * | 1.3 | * | * | 1.4 |
| MW-9-1 | 127 + 10 | 9 | 3 - 4.5 | soil | mg/kg | 3/10/93 | * | * | * | * | * | * | * | * | * | 0.99 | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | 8 - 8.5 | soil | mg/kg | 3/10/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | 13 - 14.5 | soil | mg/kg | 3/10/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | | water | mg/l | 3/15/93 | * | * | * | * | * | * | * | * | * | 0.012 | * | * | * | * | * | * | * | * | * | * | * | * | * |
| MW-9-2 | 130 + 20 | 9 | 3.5 - 5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | 8 - 9.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | 13 - 14.5 | soil | mg/kg | 3/12/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| | | | | water | mg/l | 3/15/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-11-1 | 140 + 60 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-34 | 140 + 60 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-11-2 | 140 + 95 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-35 | 141 + 55 | 22 | 0.5 - 1 | soil | mg/kg | 3/5/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-36 | 142 + 30 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-37 | 143 + 35 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-38 | 144 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-39 | 145 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-40 | 146 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-41 | 146 + 90 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-42 | 149 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-11-3 | 150 + 40 | 11 | 0.5 - 1 | soil | mg/kg | 3/5/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-43 | 151 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-44 | 153 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-45 | 155 + 00 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-46 | 155 + 60 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-47 | 156 + 10 | 22 | 0.5 - 1 | soil | mg/kg | 3/8/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-48 | 156 + 54 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| SS-22-49 | 157 + 82 | 22 | 0.5 - 1 | soil | mg/kg | 3/9/93 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |

(1)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2MN | 2-methylnaphthalene | BAP | benzo(a)pyrene | CRY | chrysene | FLA | fluoranthene | PHE | phenanthrene |
| ACE | acenaphthene | BBF | benzo(b)fluoranthene | DBP | di-n-butylphthalate | FLE | fluorene | PYR | pyrene |
| ACY | acenaphthylene | BGP | benzo(g,h,i)perylene | DOP | di-n-octylphthalate | HCB | hexachlorobutadiene | | |
| ANT | anthracene | BKF | benzo(k)fluoranthene | DAH | dibenz(a,h)anthracene | I123P | indeno(1,2,3-cd)pyrene | | |
| BAA | benzo(a)anthracene | B2EP | bis(2-ethylhexyl)phthalate | DBF | dibenzofuran | NAP | naphthalene | | |

* Non detect

## Table 2-4
## Summary of Reactivity Analytical Results
## Guadalupe River Project

| Sample ID | Station | Area | Sample Depth (ft) | Sample Matrix | Units | Date Sampled | Reactive Cyanide | Reactive Sulfide |
|---|---|---|---|---|---|---|---|---|
| GR-SB-1 | 133 + 30 | 22 | 0.5 - 3 | soil | mg/kg | 4/4/94 | < 1 | < 10 |
| GR-SB-2 | 133 + 90 | 22 | 0.5 - 3 | soil | mg/kg | 4/4/94 | < 1 | < 10 |
| GR-SB-3 | 134 + 50 | 22 | 3 - 5.5 | soil | mg/kg | 4/4/94 | < 1 | < 10 |
| GR-SB-4 | 135 + 10 | 22 | 0.5 - 3 | soil | mg/kg | 4/4/94 | < 1 | < 10 |
| GR-SB-5 | 135 + 70 | 22 | 3 - 5.5 | soil | mg/kg | 4/4/94 | < 1 | < 10 |
| GR-SB-6 | 136 + 30 | 22 | 3 - 5.5 | soil | mg/kg | 4/4/94 | < 1 | < 10 |
| GR-SB-7 | 136 + 90 | 22 | 3 - 5.5 | soil | mg/kg | 4/5/94 | < 1 | < 10 |
| GR-SB-8 | 137 + 50 | 22 | 0.5 - 3 | soil | mg/kg | 4/5/94 | < 1 | < 10 |
| GR-SB-9 | 138 + 10 | 22 | 0.5 - 3 | soil | mg/kg | 4/5/94 | < 1 | < 10 |
| GR-SB-10 | 138 + 70 | 22 | 0.5 - 3 | soil | mg/kg | 4/5/94 | < 1 | < 10 |
| GR-SB-11 | 139 + 30 | 22 | 5.5 - 8 | soil | mg/kg | 4/5/94 | < 1 | < 10 |
| GR-SB-12 | 139 + 90 | 22 | 0.5 - 3 | soil | mg/kg | 4/5/94 | < 1 | < 10 |
| GR-SB-13 | 140 + 50 | 22 | 0.5 - 3 | soil | mg/kg | 4/5/94 | < 1 | < 10 |
| GR-SB-14 | 141 + 10 | 22 | 5.5 - 8 | soil | mg/kg | 4/6/94 | < 1 | < 10 |
| GR-SB-15 | 141 + 70 | 22 | 5.5 - 8 | soil | mg/kg | 4/7/94 | < 1 | < 10 |
| GR-SB-16 | 142 + 30 | 22 | 5.5 - 8 | soil | mg/kg | 4/6/94 | < 1 | < 10 |
| GR-SB-17 | 142 + 90 | 22 | 0.5 - 3 | soil | mg/kg | 4/6/94 | < 1 | < 10 |
| GR-SB-18 | 143 + 50 | 22 | 3 - 5.5 | soil | mg/kg | 4/6/94 | < 1 | < 10 |
| GR-SB-19 | 144 + 10 | 22 | 3 - 5.5 | soil | mg/kg | 4/7/94 | < 1 | < 10 |
| GR-SB-20 | 144 + 70 | 22 | 3 - 5.5 | soil | mg/kg | 4/7/94 | < 1 | < 10 |
| GR-SB-21 | 145 + 30 | 22 | 5.5 - 8 | soil | mg/kg | 4/7/94 | < 1 | < 10 |
| GR-SB-22 | 145 + 90 | 22 | 3 - 5.5 | soil | mg/kg | 4/7/94 | < 1 | < 10 |
| GR-SB-23 | 146 + 50 | 22 | 0.5 - 3 | soil | mg/kg | 4/7/94 | < 1 | < 10 |
| GR-SB-24 | 147 + 10 | 22 | 0.5 - 3 | soil | mg/kg | 4/7/94 | < 1 | < 10 |

# Table 2-5
# Statistical Analyses of Soluble Lead & Copper
# Area 22 - Reach 3
# Guadalupe River Project

| Sample Location | STLC mg/l Pb | STLC mg/l Cu | Depth Interval (ft) Analyzed .5 - 3 1 | 3 - 5.5 2 | 5.5 -8 3 |
|---|---|---|---|---|---|
| 1 | 1.5 | 0.6 | * | | |
| 2 | 1.1 | 0.5 | * | | |
| 3 | 0.3 | 0.3 | | * | |
| 4 | 2.4 | 0.7 | * | | |
| 5 | 5.4 | 0.7 | | * | |
| 6 | 2.3 | 1 | | * | |
| 7 | 1.1 | 4.5 | | * | |
| 8 | 0.1 | 0.1 | * | | |
| 9 | 1 | 0.2 | * | | |
| 10 | 1.8 | 0.2 | * | | |
| 11 | 0.3 | 0.3 | | | * |
| 12 | 0.7 | 0.4 | * | | |
| 13 | 10 | 25 | * | | |
| 14 | 9.8 | 7.8 | | | * |
| 15 | 12 | 2.1 | | | * |
| 16 | 5.6 | 1.5 | | | * |
| 17 | 2.6 | 0.7 | * | | |
| 18 | 2.9 | 1.5 | | * | |
| 19 | 0.7 | 0.3 | | * | |
| 20 | 1.9 | 1.5 | | * | |
| 21 | 2.9 | 0.8 | | | * |
| 22 | 0.2 | 0.3 | | * | |
| 23 | 0.8 | 0.3 | * | | |
| 24 | 1.4 | 0.5 | * | | |
| total | 68.8 | 51.8 | | | |
| mean | 2.87 | 2.16 | | | |
| variance | 11.06 | 26.53 | | | |
| std deviation | 3.33 | 5.15 | | | |
| std error | 0.68 | 1.05 | | | |
| t .20 | 1.32 | 1.32 | | | |
| upper CI | 3.76 | 3.55 | | | |
| RT | 5.00 | 25.00 | | | |
| n | 4.23 | 0.09 | | | |

Notes:

Analysis per EPA SW846, see Appendix B.

Upper CI < RT

For lead: Mean = 2.87 mg/l = Total/24
upper CI = 3.76 mg/l
RT = 5.0 mg/l

For copper; Mean = 2.16 mg/l
upper CI = 3.55 mg/l
RT = 25 mg/l

## Table 3-1
## Criteria Used to Assess Waste Classification
## Guadalupe River Project

| | **Petroleum Hydrocarbon** | **Metals** | **Semivolatiles (PNAs)** |
|---|---|---|---|
| RCRA Hazardous<br>CA Hazardous | NA<br>NA | Total>TCLP<br>Total>TTLC<br>WET>STLC | NA<br>NA |
| Nonhazardous Designated | TRPH>1,000 mg/kg<br>TPH-d>1,000 mg/kg<br>TPH-g>100 mg/kg | DI WET:<br>Pb>0.75 mg/l<br>Cu>10.0 mg/l<br>Ni>5.0 mg/l<br>Hg>0.1 mg/l | DI WET:<br>Carcinogenic PNAs>0.01 mg/l<br>Total PNAs>1.4 mg/l |
| Nonhazardous Solid | 100 mg/kg<TRPH<1,000 mg/kg<br>100 mg/kg<TPH-d<1,000 mg/kg<br>10 mg/kg<TPH-g<100 mg/kg | DI WET:<br>Pb<0.75 mg/l<br>Cu<10.0 mg/l<br>Ni<5.0 mg/l<br>Hg<0.1 mg/l | DI WET:<br>Carcinogenic PNAs<0.01 mg/l<br>Total PNAs<1.4 mg/l |
| Inert | TRPH<100 mg/kg<br>TPH-d<100 mg/kg<br>TPH-g<10 mg/kg | DI WET:<br>Pb<0.75 mg/l<br>Cu<10.0 mg/l<br>Ni<5.0 mg/l<br>Hg<0.1 mg/l | DI WET:<br>Carcinogenic PNAs<0.01 mg/l<br>Total PNAs<1.4 mg/l |
| Worker Protection (Level D) | TRPH<2,200 mg/kg<br>TPH-d<1,800 mg/kg<br>TPH-g<1,800 mg/kg | Total:<br>Pb<1,000 mg/kg<br>Cu<42,900 mg/kg<br>Ni<23,000 mg/kg<br>Hg<380 mg/kg | Total PNAs<22 mg/kg |

# FIGURES

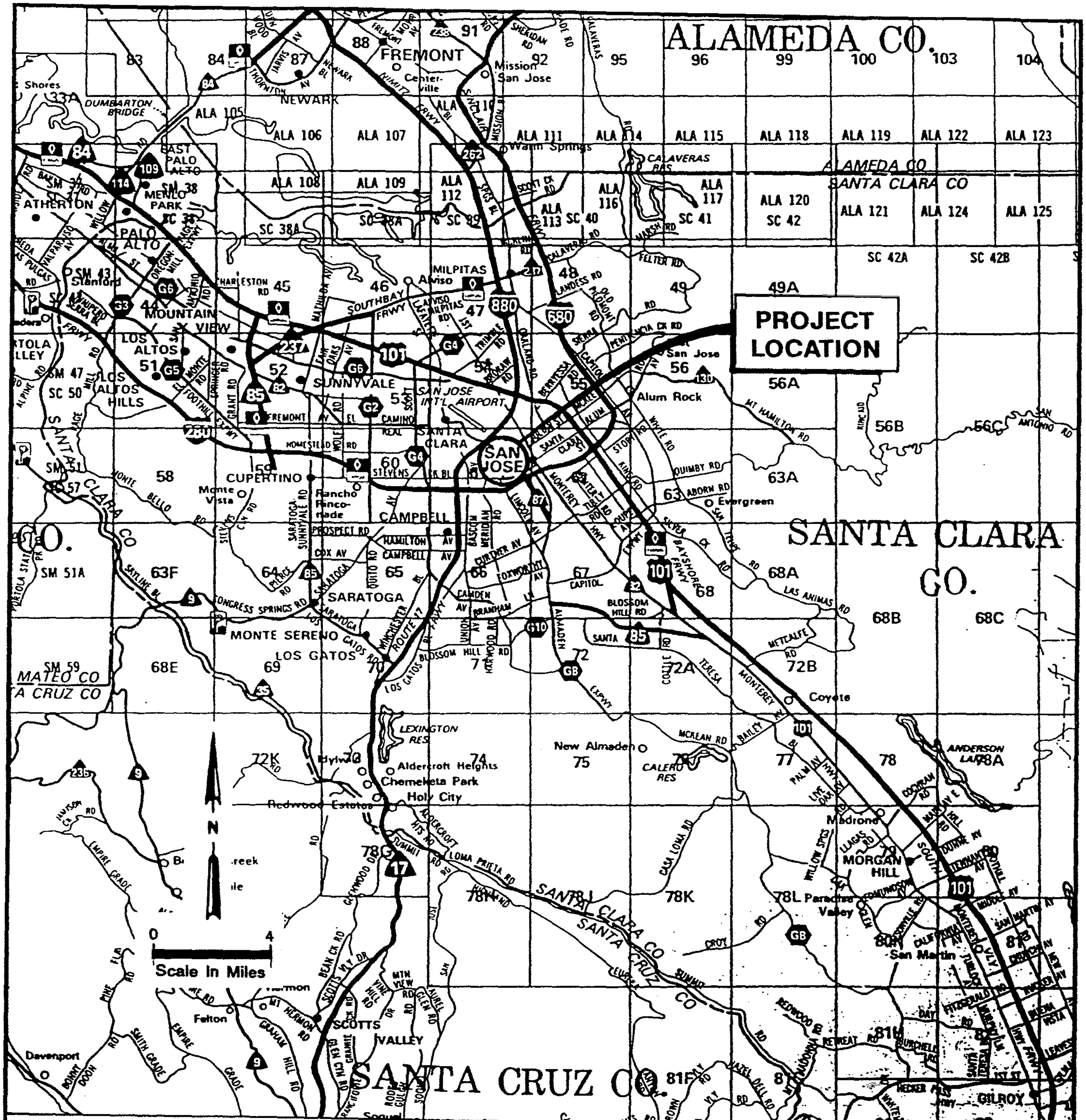


FIGURE 1-1
PROJECT LOCATION MAP
Guadalupe River Project
San Jose, California

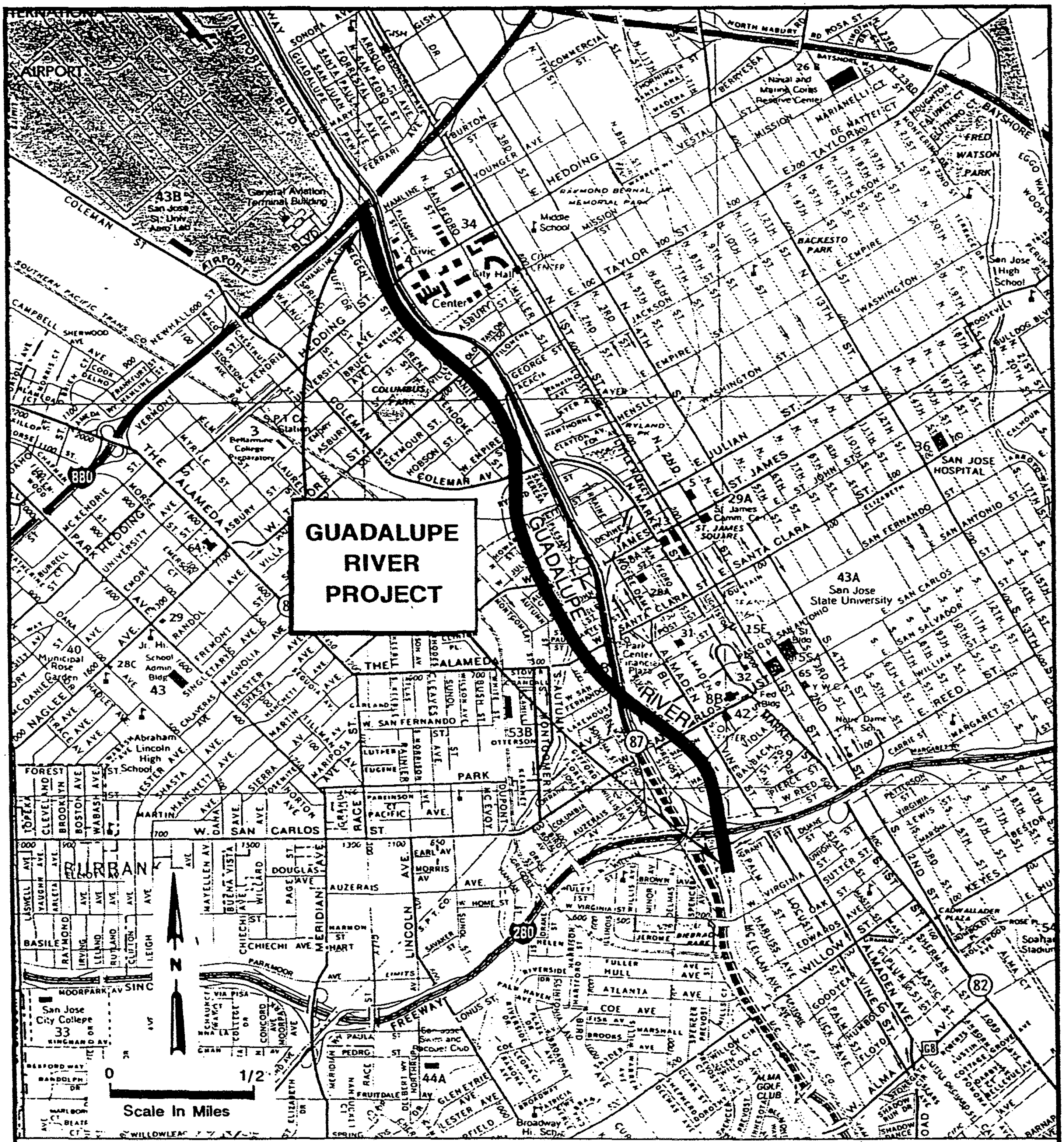


FIGURE 1-2
PROJECT AREA MAP
Guadalupe River Project
San Jose, California

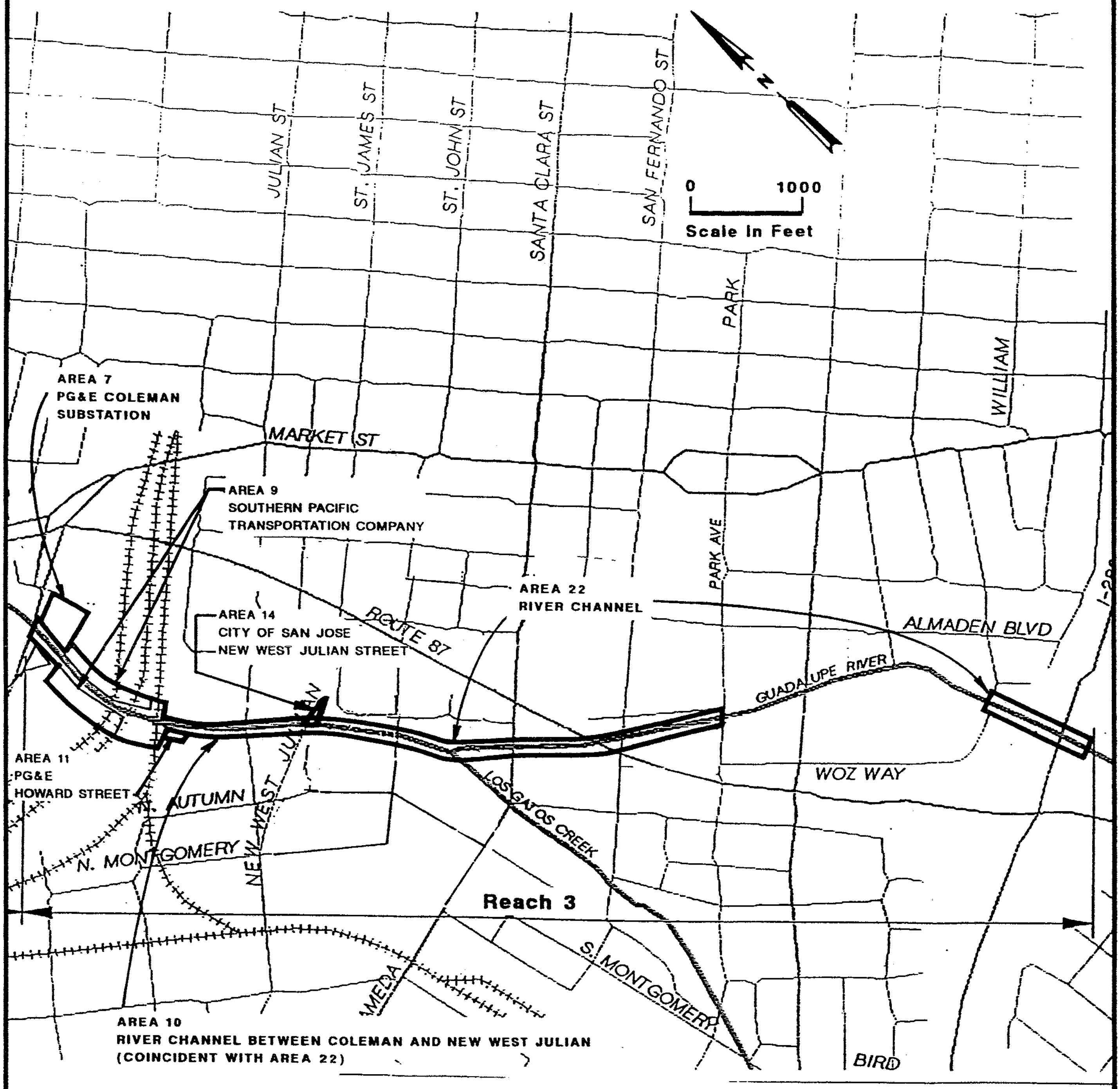
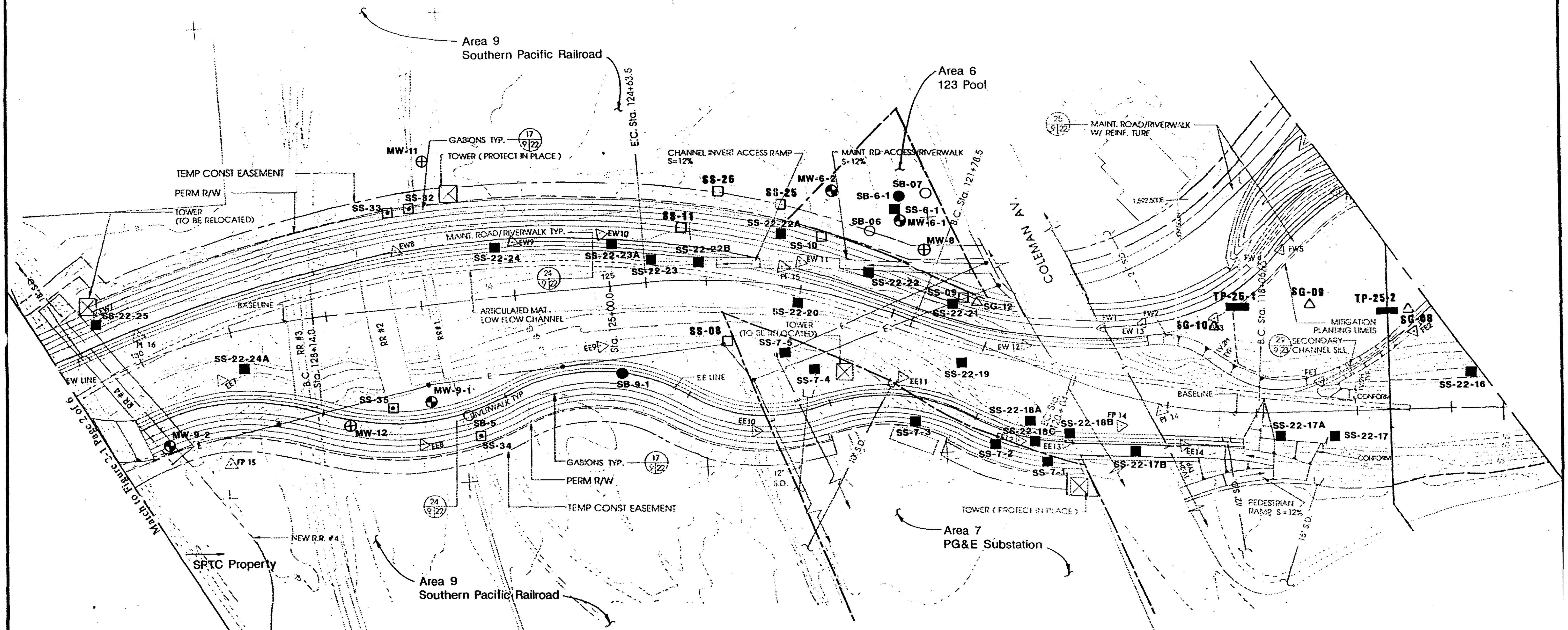


Figure 1-3

**REACH 3 RIVER CHANNEL AND ASSIMILATED AREAS**

**Soil Characterization Report**

**Guadalupe River Project**



## LEGEND

**PHASE I CH2M Hill**

**SS-#** ☐ SHALLOW SOIL SAMPLE
**MW-#** ⊕ MONITORING WELL
**SB-#** ○ SOIL BORING
**SG-#** △ SOIL GAS SAMPLE

**EXISTING-BY OTHERS**

**SB-#** ⊙ SOIL BORING
**MW-#** ⊕ MONITORING WELL
**SG-#** ▲ SOIL GAS SAMPLE
**SS-#** ▣ SHALLOW SOIL SAMPLE

------- EXISTING PROPERTY LINE(Approximate)

**PHASE II CH2M Hill**

**TP-#** ▬ TEST PIT SAMPLE
**SS-#** ■ SHALLOW SOIL SAMPLE
**SB-#** ● SOIL BORING
**MW-#** ⊕ MONITORING WELL

SOURCE: *Base map from AN West AGS Plan and Profile drawing Plates 3 through 12, Sacramento District Corps of Engineers, January 1991*
*Survey data for sampling locations provided by Santa Clara Valley Water District*

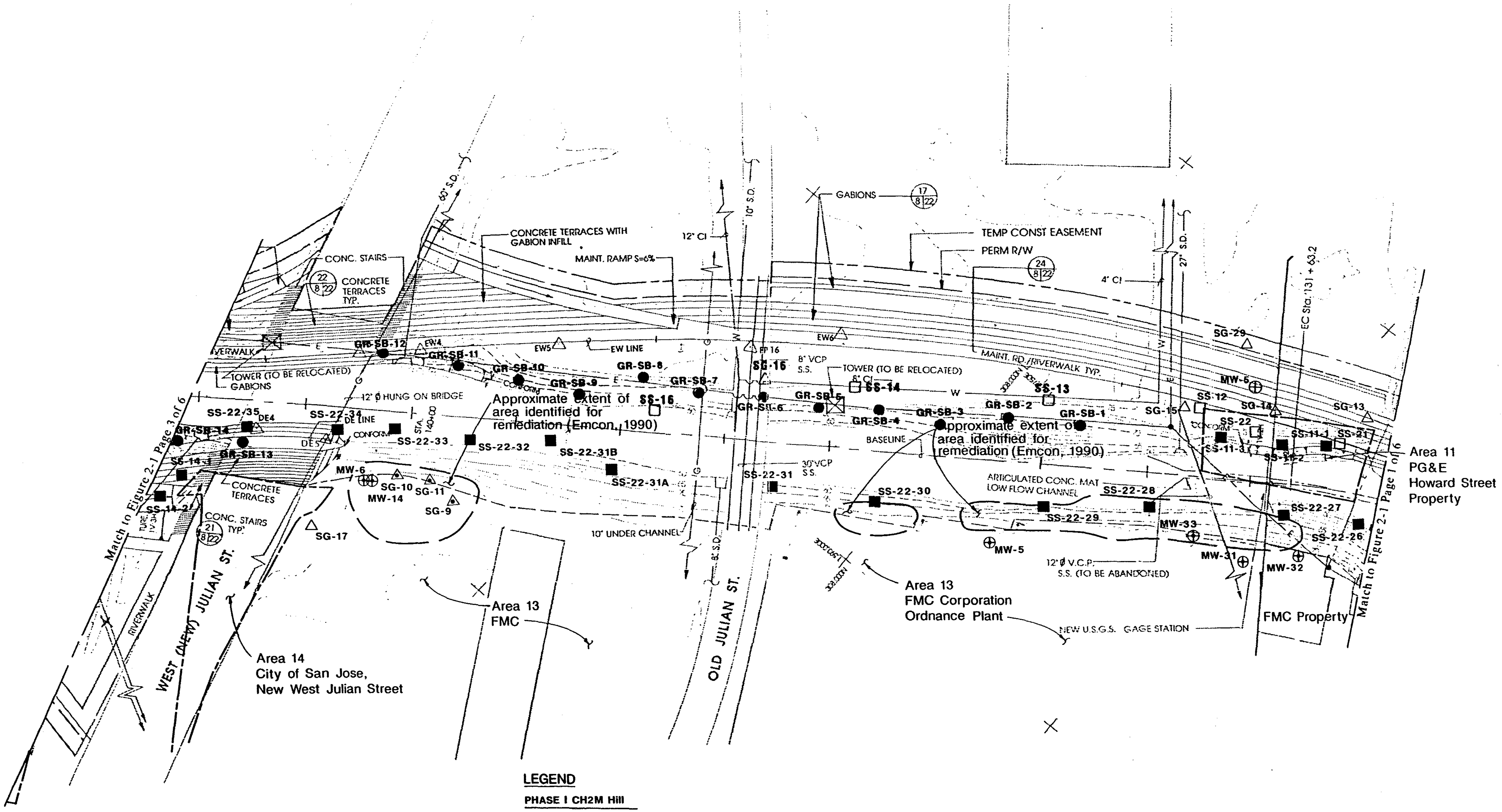
N

0 50
Scale In Feet

**Figure 2-1**
**Sample Location Map**
**Guadalupe River Project**
**San Jose, California**

**Page 1 of 6**

CH2M HILL



## LEGEND

**PHASE I CH2M Hill**

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- SS-# ⊡ SHALLOW SOIL SAMPLE

– – —— EXISTING PROPERTY LINE(Approximate)

**PHASE II CH2M Hill**

- TP-# ▬ TEST PIT SAMPLE
- SS-# ■ SHALLOW SOIL SAMPLE
- SB-# ● SOIL BORING
- MW-# ⊕ MONITORING WELL

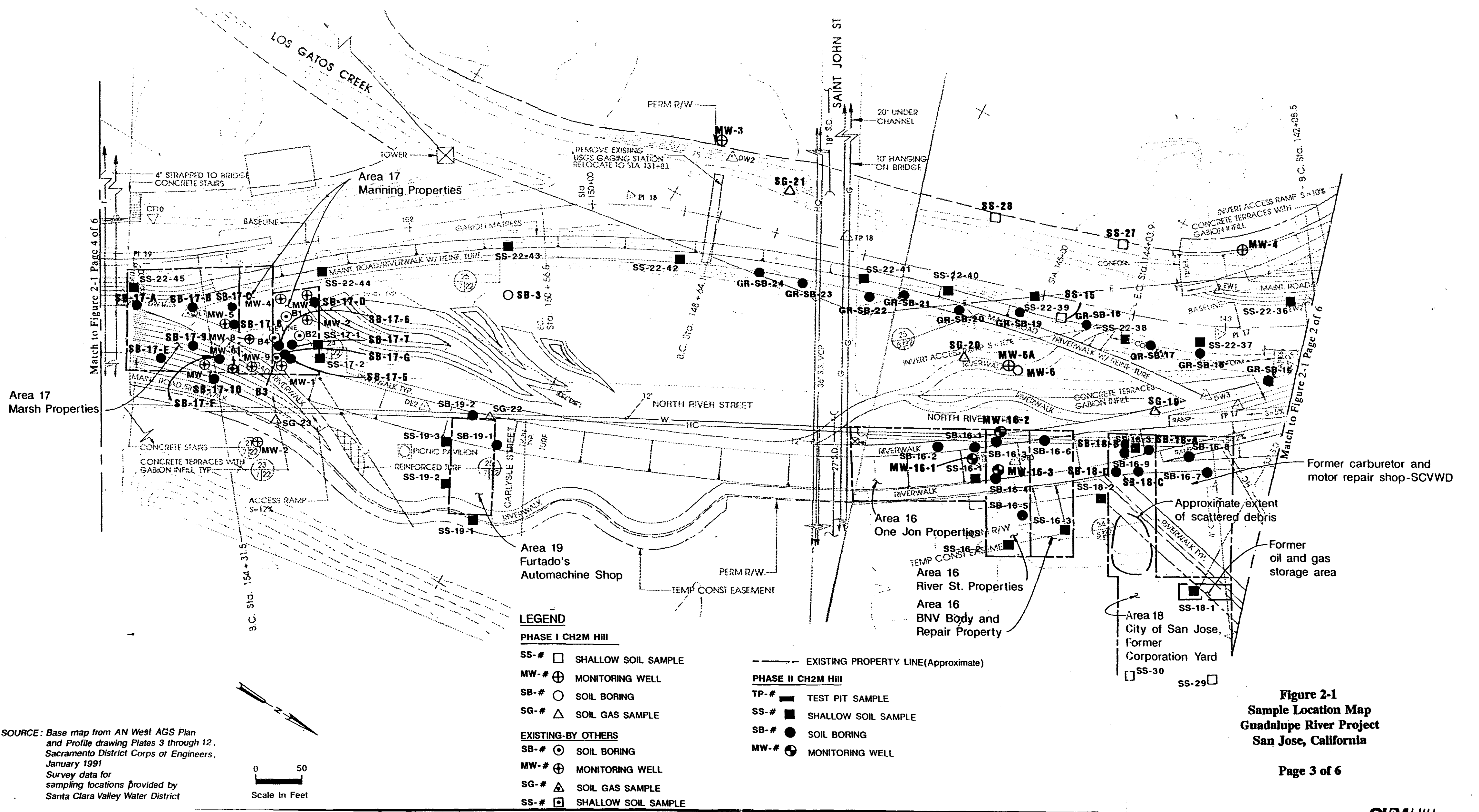
N

0 50
Scale In Feet

*SOURCE: Base map from AN West AGS Plan and Profile drawing Plates 3 through 12, Sacramento District Corps of Engineers, January 1991*
*Survey data for sampling locations provided by Santa Clara Valley Water District*

**Figure 2-1**
**Sample Location Map**
**Guadalupe River Project**
**San Jose, California**

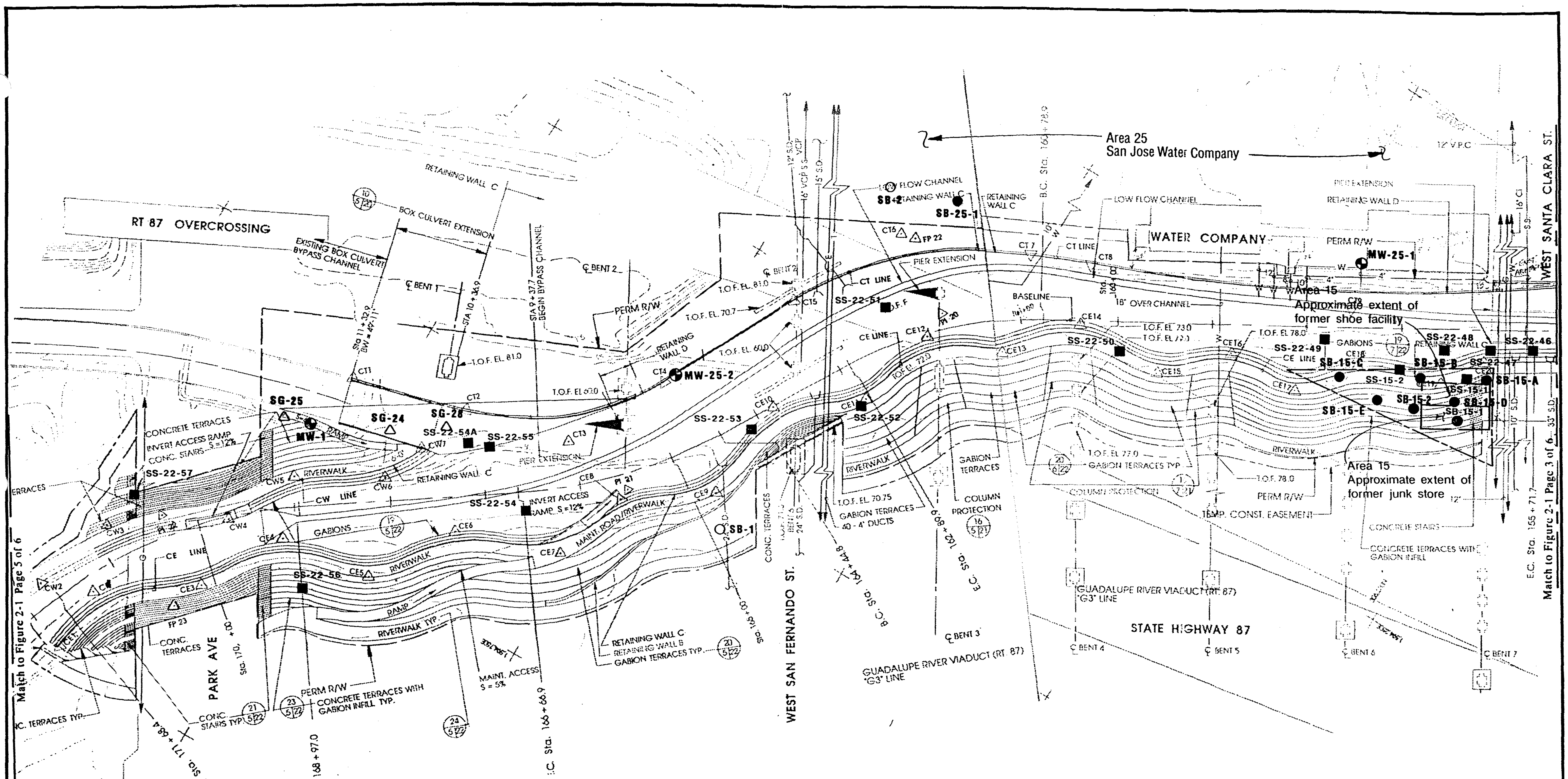
**Page 2 of 6**



SOURCE: *Base map from AN West AGS Plan and Profile drawing Plates 3 through 12, Sacramento District Corps of Engineers, January 1991*
*Survey data for sampling locations provided by Santa Clara Valley Water District*

**Figure 2-1**
**Sample Location Map**
**Guadalupe River Project**
**San Jose, California**

**Page 3 of 6**



## LEGEND

**PHASE I CH2M Hill**

| | | |
|---|---|---|
| SS-# | ☐ | SHALLOW SOIL SAMPLE |
| MW-# | ⊕ | MONITORING WELL |
| SB-# | ○ | SOIL BORING |
| SG-# | △ | SOIL GAS SAMPLE |

**EXISTING-BY OTHERS**

| | | |
|---|---|---|
| SB-# | ⊙ | SOIL BORING |
| MW-# | ⊕ | MONITORING WELL |
| SG-# | ▲ | SOIL GAS SAMPLE |
| SS-# | ▣ | SHALLOW SOIL SAMPLE |

- - - - - EXISTING PROPERTY LINE(Approximate)

**PHASE II CH2M Hill**

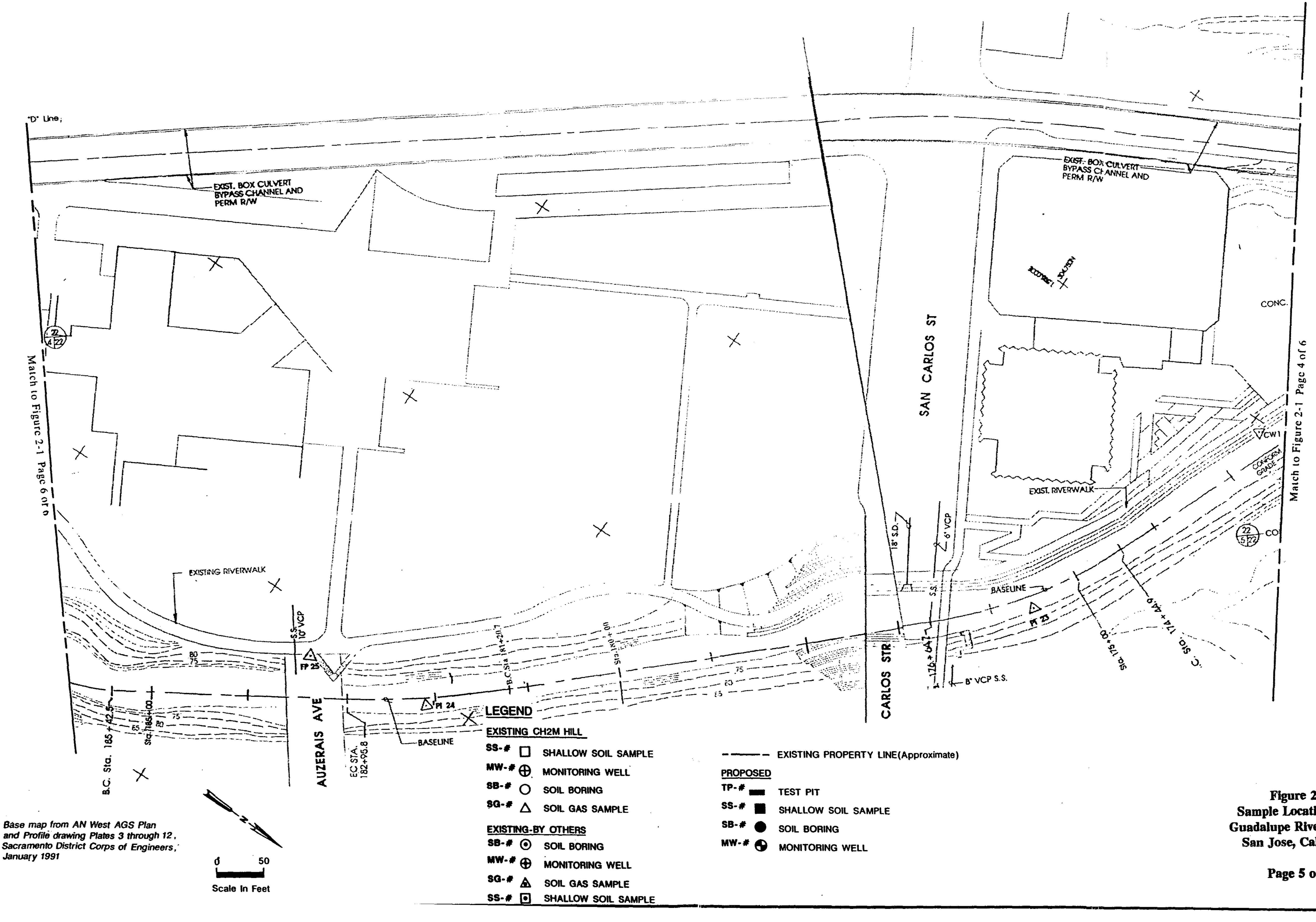
| | | |
|---|---|---|
| TP-# | ▬ | TEST PIT SAMPLE |
| SS-# | ■ | SHALLOW SOIL SAMPLE |
| SB-# | ● | SOIL BORING |
| MW-# | ● | MONITORING WELL |

*SOURCE: Base map from AN West AGS Plan and Profile drawing Plates 3 through 12, Sacramento District Corps of Engineers, January 1991*
*Survey data for sampling locations provided by Santa Clara Valley Water District*

0 50
Scale In Feet

**Figure 2-1**
**Sample Location Map**
**Guadalupe River Project**
**San Jose, California**

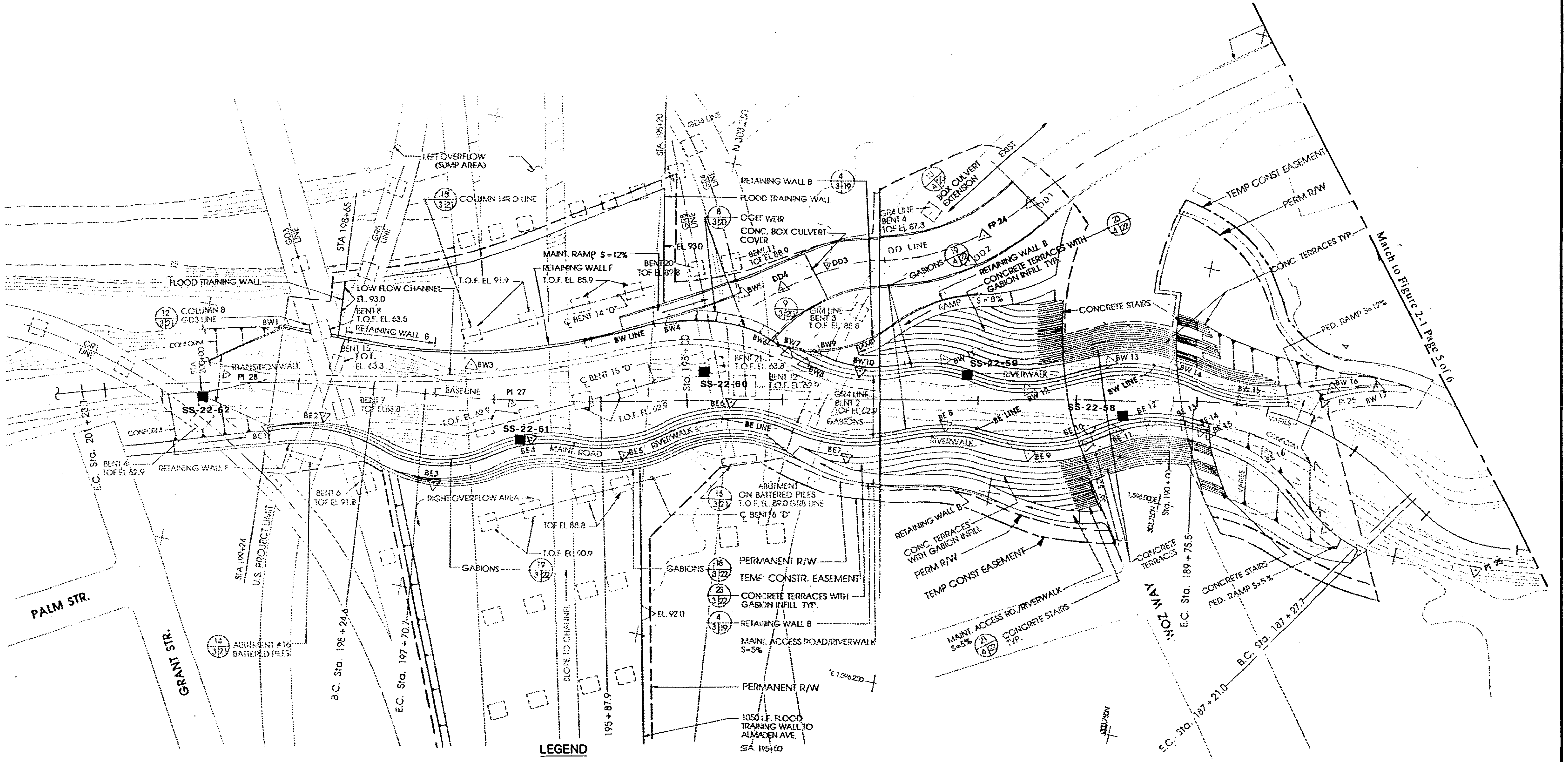
**Page 4 of 6**



*SOURCE: Base map from AN West AGS Plan and Profile drawing Plates 3 through 12, Sacramento District Corps of Engineers, January 1991*

**Figure 2-1**
**Sample Location Map**
**Guadalupe River Project**
**San Jose, California**

**Page 5 of 6**



SOURCE: *Base map from AN West AGS Plan and Profile drawing Plates 3 through 12, Sacramento District Corps of Engineers, January 1991*
*Survey data for sampling locations provided by Santa Clara Valley Water District*

0 50
Scale In Feet

**LEGEND**

**PHASE I CH2M Hill**

SS-# □ SHALLOW SOIL SAMPLE
MW-# ⊕ MONITORING WELL
SB-# ○ SOIL BORING
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**EXISTING-BY OTHERS**

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MW-# ⊕ MONITORING WELL
SG-# ▲ SOIL GAS SAMPLE
SS-# ▣ SHALLOW SOIL SAMPLE

——— EXISTING PROPERTY LINE(Approximate)

**PHASE II CH2M Hill**

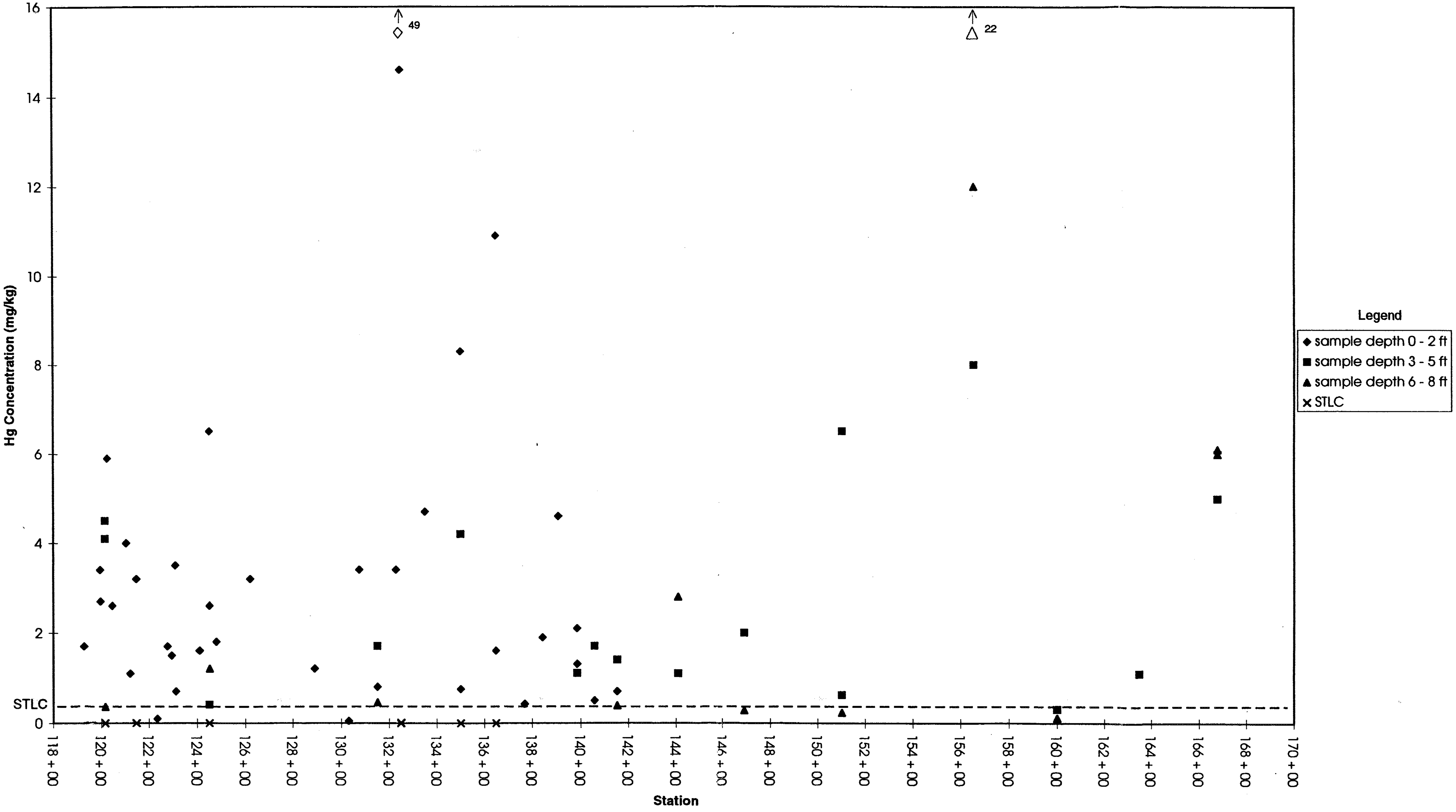
TP-# ▬ TEST PIT SAMPLE
SS-# ■ SHALLOW SOIL SAMPLE
SB-# ● SOIL BORING
MW-# ◐ MONITORING WELL

**Figure 2-1**
**Sample Location Map**
**Guadalupe River Project**
**San Jose, California**

**Page 6 of 6**

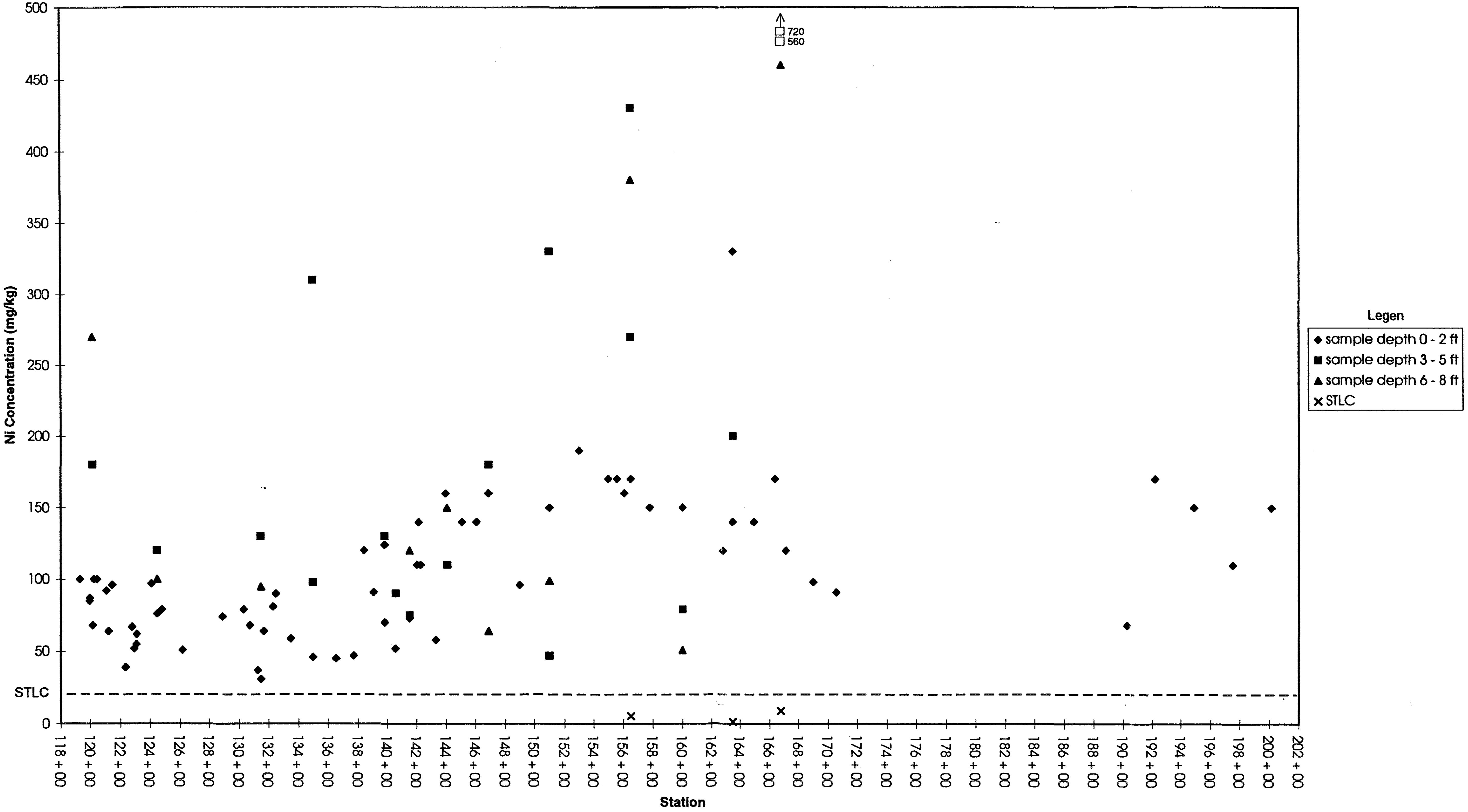
CH2M HILL

# Figure 2-2a
# Results of the Total and Soluble Metals Analyses, Mercury
# Guadalupe River Project



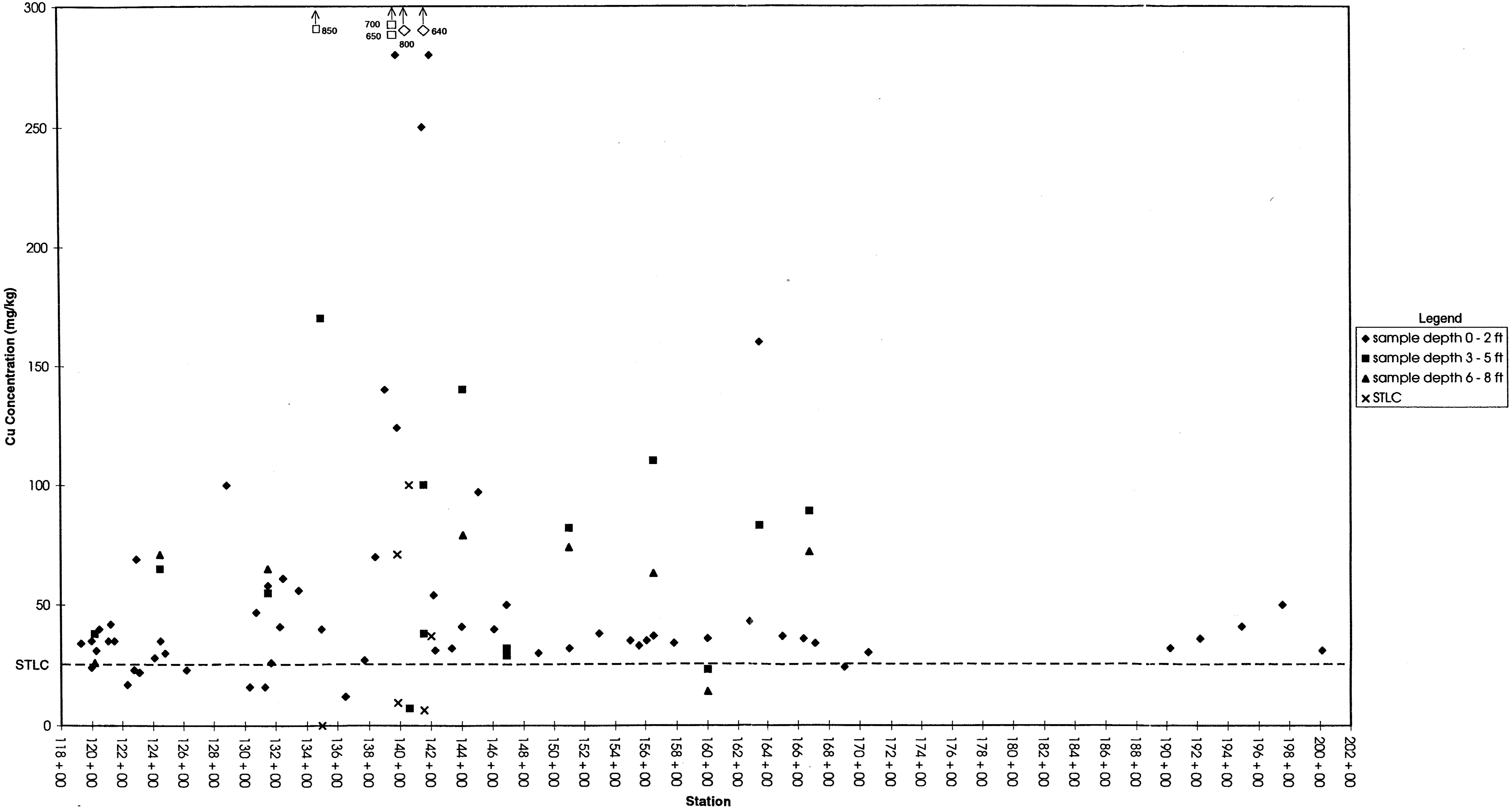
017-RAHG.XLW

## Figure 2-2b
## Results of the Total and Soluble Metals Analyses, Nickel
## Guadalupe River Project

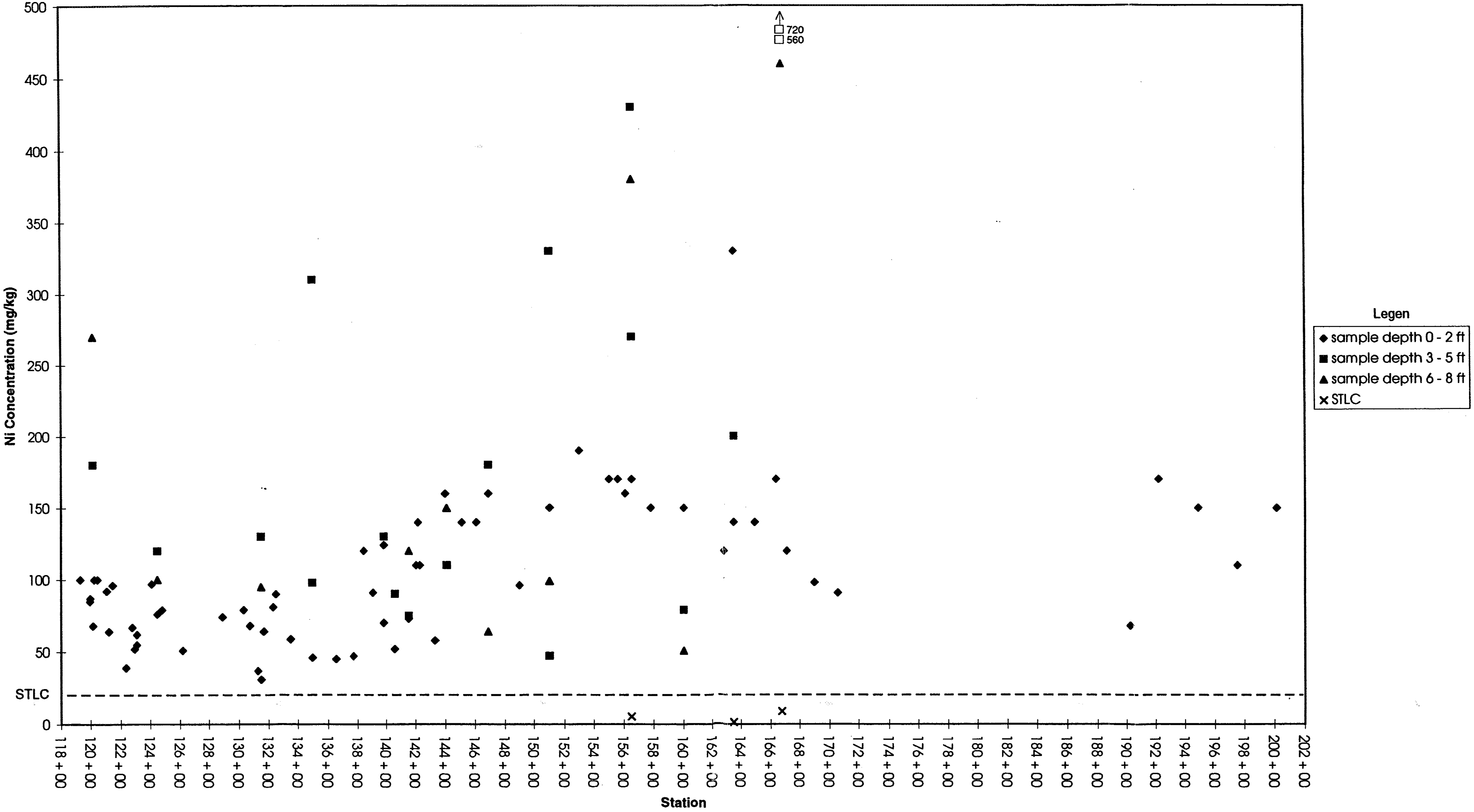


017-RANI.XLW

## Figure 2-2c
## Results of the Total and Soluble Metals Analyses, Copper
## Guadalupe River Project



## Figure 2-2b
## Results of the Total and Soluble Metals Analyses, Nickel
## Guadalupe River Project



## BOX 1. STRATEGY FOR DETERMINING IF CHEMICAL CONTAMINANTS OF SOLID WASTES ARE PRESENT AT HAZARDOUS LEVELS - SIMPLE RANDOM SAMPLING

| Step | General Procedures |
|---|---|
| 1. | Obtain preliminary estimates of $\bar{x}$ and $s^2$ for each chemical contaminant of a solid waste that is of concern. The two above-identified statistics are calculated by, respectively, Equations 2a and 3a (Table 9-1). |
| 2. | Estimate the appropriate number of samples ($n_1$) to be collected from the waste through use of Equation 8 (Table 9-1) and Table 9-2. Derive individual values of $n_1$ for each chemical contaminant of concern. The appropriate number of samples to be taken from the waste is the greatest of the individual $n_1$ values. |
| 3. | Randomly collect at least $n_1$ (or $n_2 - n_1$, $n_3 - n_2$, etc., as will be indicated later in this box) samples from the waste (collection of a few extra samples will provide protection against poor preliminary estimates of $\bar{x}$ and $s^2$). Maximize the physical size (weight or volume) of all samples that are collected. |
| 4. | Analyze the $n_1$ (or $n_2 - n_1$, $n_3 - n_2$ etc.) samples for each chemical contaminant of concern. Superficially (graphically) examine each set of analytical data for obvious departures from normality. |
| 5. | Calculate $\bar{x}$, $s^2$, the standard deviation (s), and $s_{\bar{x}}$ for each set of analytical data by, respectively, Equations 2a, 3a, 4, and 5 (Table 9-1). |
| 6. | If $\bar{x}$ for a chemical contaminant is equal to or greater than the applicable RT (Equation 7, Table 9-1) and is believed to be an accurate estimator of $\mu$, the contaminant is considered to be present in the waste at a hazardous concentration, and the study is completed. Otherwise, continue the study. In the case of a set of analytical data that does not exhibit obvious abnormality and for which $\bar{x}$ is greater than $s^2$, perform the following calculations with nontransformed data. Otherwise, consider transforming the data by the square root transformation (if $\bar{x}$ is about equal to $s^2$) or the arcsine transformation (if $\bar{x}$ is less than $s^2$) and performing all subsequent calculations with transformed data. Square root and arcsine transformations are defined by, respectively, Equations 10 and 11 (Table 9-1). |
| 7. | Determine the CI for each chemical contaminant of concern by Equation 6 (Table 9-1) and Table 9-2. If the upper limit of the CI is less than the applicable RT (Equations 6 and 7, Table 9-1), the chemical contaminant is not considered to be present in the waste at a hazardous concentration and the study is completed. Otherwise, the opposite conclusion is tentatively reached. |

Source: EPA SW846 Vol. 2 Field Mannual, Chapter 9

TABLE 9-1. BASIC STATISTICAL TERMINOLOGY APPLICABLE TO SAMPLING PLANS FOR SOLID WASTES

| Terminology | Symbol | Mathematical equation | (Equation) |
|---|---|---|---|
| • Variable (e.g., barium or endrin) | $x$ | — | |
| • Individual measurement of variable | $x_i$ | — | |
| • Mean of all possible measurements of variable (population mean) | $\mu$ | $\mu = \frac{\sum_{i=1}^{N} x_i}{N}$, with N = number of possible measurements | (1) |
| • Mean of measurements generated by sample (sample mean) | $\bar{x}$ | Simple random sampling and systematic random sampling<br>$\bar{x} = \frac{\sum_{i=1}^{n} x_i}{n}$, with n = number of sample measurements | (2a) |
| | | Stratified random sampling<br>$\bar{x} = \sum_{k=1}^{r} W_k \bar{x}_k$, with $\bar{x}_k$ = stratum mean and $W_k$ = fraction of population represented by Stratum k (number of strata [k] range from 1 to r) | (2b) |
| • Variance of sample | $s^2$ | Simple random sampling and systematic random sampling<br>$s^2 = \frac{\sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i)^2/n}{n - 1}$ | (3a) |
| | | Stratified random sampling<br>$s^2 = \sum_{k=1}^{r} W_k s_k^2$, with $s_k^2$ = stratum variance and $W_k$ = fraction of population represent by Stratum k (number of strata [k] ranges from 1 to r) | (3b) |

TABLE 9-1. (Continued)

| Terminology | Symbol | Mathematical equation | (Equation) |
|---|---|---|---|
| • Standard deviation of sample | $s$ | $s = \sqrt{s^2}$ | (4) |
| • Standard error (also standard error of mean and standard deviation of mean) of sample | $s_{\bar{x}}$ | $s_{\bar{x}} = \frac{s}{\sqrt{n}}$ | (5) |
| • Confidence interval for $\mu$[a] | CI | $CI = \bar{x} \pm t_{.20}\, s_{\bar{x}}$, with $t_{.20}$ obtained from Table 2 for appropriate degrees of freedom | (6) |
| • Regulatory threshold[a] | RT | Defined by EPA (e.g., 100 ppm for barium in elutriate of EP toxicity) | (7) |
| • Appropriate number of samples to collect from a solid waste (financial constraints not considered) | $n$ | $n = \frac{t^2_{.20} s^2}{\Delta^2}$, with $\Delta = RT - \bar{x}$ | (8) |
| • Degrees of freedom | df | $df = n - 1$ | (9) |
| • Square root transformation | --- | $X_i + 1/2$ | (10) |
| • Arcsin transformation | --- | Arcsin p; if necessary, refer to any text on basic statistics; measurements must be converted to percentages (p) | (11) |

---

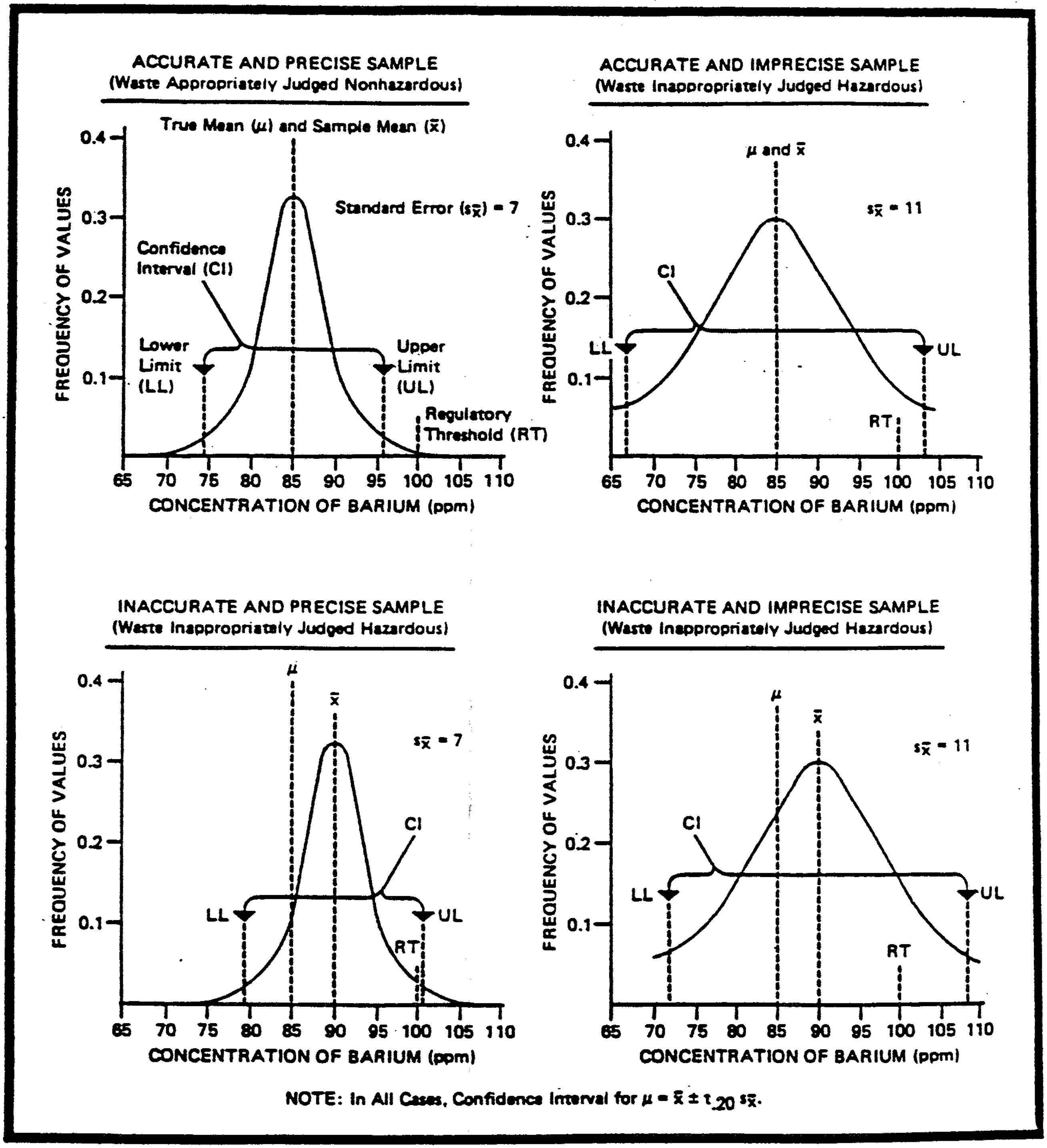
[a] The upper limit of the CI for $\mu$ is compared with the applicable regulatory threshold (RT) to determine if a solid waste contains the variable (chemical contaminant) of concern at a hazardous level. The contaminant of concern is not considered to be present in the waste at a hazardous level if the upper limit of the CI is less than the applicable RT. Otherwise, the opposite conclusion is reached.

## TABLE 9-2. TABULATED VALUES OF STUDENT'S "t" FOR EVALUATING SOLID WASTES

| Degrees of freedom (n-1)[a] | Tabulated "t" value[b] |
|---|---|
| 1 | 3.078 |
| 2 | 1.886 |
| 3 | 1.638 |
| 4 | 1.533 |
| 5 | 1.476 |
| 6 | 1.440 |
| 7 | 1.415 |
| 8 | 1.397 |
| 9 | 1.393 |
| 10 | 1.372 |
| 11 | 1.363 |
| 12 | 1.356 |
| 13 | 1.350 |
| 14 | 1.345 |
| 15 | 1.341 |
| 16 | 1.337 |
| 17 | 1.333 |
| 18 | 1.330 |
| 19 | 1.328 |
| 20 | 1.325 |
| 21 | 1.323 |
| 22 | 1.321 |
| 23 | 1.319 |
| 24 | 1.318 |
| 25 | 1.316 |
| 26 | 1.315 |
| 27 | 1.314 |
| 28 | 1.313 |
| 29 | 1.311 |
| 30 | 1.310 |
| 40 | 1.303 |
| 60 | 1.296 |
| 120 | 1.289 |
|  | 1.282 |

[a] Degrees of freedom (df) are equal to the number of samples (n) collected from a solid waste less one.

[b] Tabulated "t" values are for a two-tailed confidence interval and a probability of 0.20 (the same values are applicable to a one-tailed confidence interval and a probability of 0.10).



NOTE: In All Cases, Confidence Interval for $\mu = \bar{x} \pm t_{.20}\, s_{\bar{x}}$.

Figure 9-1.—Important theoretical relationships between sampling accuracy and precision and regulatory objectives for a chemical contaminant of a solid waste that occurs at a concentration marginally less than its regulatory threshold. In this example, barium is the chemical contaminant. The true mean concentration of barium in the elutriate of the EP toxicity test is 85 ppm, as compared to a regulatory threshold of 100 ppm. The upper limit of the confidence interval for the true mean concentration, which is estimated from the sample mean and standard error, must be less than the regulatory threshold if barium is judged to be present in the waste at a nonhazardous level.

# APPENDIX B

# Quality Assurance Results Summary
for
Clayton Project No. 94040.74

|  |  |
|---|---|
| Clayton Lab Number: | 9404073-01A |
| Ext./Prep. Method: | EPA3010 |
| Date: | 04/14/94 |
| Analyst: | RAH |
| Std. Source: | A931201 |
| Sample Matrix/Media: | TCLP |

|  |  |
|---|---|
| Analytical Method: | EPA6010 |
| Instrument ID: | 03891 |
| Date: | 04/15/94 |
| Time: | 12:00 |
| Analyst: | RAH |
| Units: | MG/L |

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER | 0.490 | 10.0 | 10.4 | 99 | 10.3 | 98 | 99 | 75 | 125 | 1.0 | 20 |
| LEAD | ND | 5.00 | 4.53 | 91 | 4.51 | 90 | 90 | 75 | 125 | 0.4 | 20 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.74

| | |
|---|---|
| Clayton Lab Number: | 9404073-01A |
| Ext./Prep. Method: | EPA3010 |
| Date: | 04/14/94 |
| Analyst: | RAH |
| Std. Source: | VHG301959R2 |
| Sample Matrix/Media: | STLC |

| | |
|---|---|
| Analytical Method: | EPA6010 |
| Instrument ID: | 03891 |
| Date: | 04/15/94 |
| Time: | 12:37 |
| Analyst: | RAH |
| Units: | MG/L |

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER | 25.4 | 10.0 | 34.8 | 94 | 34.9 | 95 | 95 | 75 | 125 | 0.3 | 20 |
| LEAD | 10.2 | 10.0 | 18.9 | 87 | 18.8 | 86 | 87 | 75 | 125 | 0.5 | 20 |

LCS = Laboratory Control Sample
= Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.74

Clayton Lab Number: 9404074-21C
Ext./Prep. Method: EPA9010
Date: 04/14/94
Analyst: MCN
Std. Source: MALL 6881
Sample Matrix/Media: SOIL

Analytical Method: EPA9010
Instrument ID: 07487
Date: 04/14/94
Time: 09:30
Analyst: MCN
Units: mg/kg

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CYANIDE | ND | 10.0 | 10.2 | 102 | 9.93 | 99 | 101 | 58 | 135 | 2.6 | 25 |

LCS = Laboratory Control Sample
LCL = Lower Control Limit
UCL = Upper Control Limit
ND = Not detected at or above limit of detection
SOR = Spike out of range due to high sample concentration.

Clayton
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# Quality Assurance Results Summary

## Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 94040.74

# Quality Assurance Results Summary
for
Clayton Project No. 94040.74

Clayton Lab Number: 9404073-01C
Ext./Prep. Method: EPA7.3.4.2
Date: 04/18/94
Analyst: HYW
Std. Source: BAKER #61170
Sample Matrix/Media: SOIL

Analytical Method: EPA7_3_4_2
Instrument ID: 00008
Date: 04/19/94
Time: 12:00
Analyst: HYW
Units: mg/Kg

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| REACTIVE SULFIDE | ND | 272 | 260 | 96 | 250 | 92 | 94 | 75 | 125 | 3.9 | 25 |

LCS = Laboratory Control Sample
Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

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# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page 1 of 1 |
| Project No. | |
| Batch No. 94G4074 | |
| Ind. Code | W.P. |
| Date Logged In 4/8/94 | By |

**REPORT RESULTS TO**
Name S. SILVERA
Title
Company CLAYTON ENV CONS
Dept.
Mailing Address P.O. BOX 9019
City, State, Zip PLEASANTON, CA 94566
Telephone No. 510-426-2657
Telefax No. 510-426-0106

Purchase Order No. 48508
Client Job No.

**SEND ~~INVOICE~~ TO**
Name
Company WESTERN BIOASSAY
Dept.
Address
City, State, Zip

Date Results Req.: Routine
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☒

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)
→ 4/21/94 ~~[illegible]~~

* Explanation of Preservative:
PREP. APHA 105 and ASTM E729 DHS ELAP TEST No 8.1

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | ACUTE AQUATIC TOXICITY | | | | | | | | | | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-19-2 | 4/7/94 | SOIL | 60ML jar | 1 | X | | | | | | | | | | 12554 |
| -20-2 | | | | | X | | | | | | | | | | 12555 |
| -21-3 | | | | | X | | | | | | | | | | 12556 |
| -22-2 | | | | | X | | | | | | | | | | 12557 |
| -23-1 | | | | | X | | | | | | | | | | 12558 |
| -24-1 | | | | | X | | | | | | | | | | 12559 |
| -15-3 | | | | | X | | | | | | | | | | 12560 |

**CHAIN OF CUSTODY**
Collected by: (print)
Collector's Signature:
Relinquished by: Date/Time 4/8/94
Received by: Kim Mitchell Date/Time 4-8-94 @ 1:15pm
Relinquished by: Kim Mitchell Date/Time 4-8-94 @ 4:20pm
Received at Lab by: Date/Time 94 16:26
Method of Shipment:
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other (explain)
5:52

Authorized by: Date
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page 7 of 7
Project No.
Batch No. 9404074
Ind. Code
W.P. 1
Date Logged In 4/8/94
By

REPORT RESULTS TO
Name SCVWD
Title NEDDAL
Company
Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No.
Client Job No.

SEND INVOICE TO
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | ~~AIR~~ CONTAIN. VOLUME ~~(specify units)~~ | Number of Containers | STLC Pb Cu | REACT. CN | REACT SULFIDE | ACUTE AQUATIC TOXICITY | TCLP Cu, Pb | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-15-1 | 4/7/94 | SOIL | 250ml | 1 | | | | | | | | | | X | 19A |
| | | | | | | | | | | | | | | | |
| GR-SB-15-2 | | | 250ml | 1 | | | | | | | | | | X | 20A |
| | | | | | | | | | | | | | | | |
| GR-SB-15-3 | | | 250ml | 2 | X | | | | X | | | | | | 21 A,B |
| GR-SB-15-3 | | | 250ml | 1 | | X | X | | | | | | | | C |
| GR-SB-15-3 | | | 60ml | 1 | | | | X | | | | | | | D |
| GR-SB-15-3 | | | BAG | 1 | | | | | | | | | | X | E |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/8/94 10:00
Received by: Jim Mitchell Date/Time 4-8-94 @ 10:00 Am
Relinquished by: Jim Mitchell Date/Time 4-8-94 @ 11:00 Am
Received at Lab by: Date/Time 4/8/94 @ 1100
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ______________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Nov[illegible]I 48375
(31[illegible]4-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) [illegible]657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

**Clayton**
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CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page 6 of 7 |
| Project No. | |
| Batch No. 9404074 | |
| Ind. Code 4/8/94 | W.P. |
| Date Logged In | By JS |

**REPORT RESULTS TO**
Name SCUWD Title NEDDAL
Company Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No. Telefax No.

Purchase Order No. Client Job No.

**SEND INVOICE TO**
Name
Company Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Cu, Pb | REACT. CN | REACT SULFIDE | ACUTE $H_2O$ TOX | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-24-1 | 4/7/94 | SOIL | 250ml | 1 | X | | | | | | | | | | 16 A |
| GR-SB-24-1 | | | 250ml | 1 | | X | X | | | | | | | | B |
| GR-SB-24-1 | | | 60ml | 1 | | | | X | | | | | | | C |
| GR-SB-24-1 | | | BAG ~~SIEVE~~ | 1 | | | | | | | | | | X | D |
| | | | | | | | | | | | | | | | |
| GR-SB-24-2 | | | 250ml | 1 | | | | | | | | | | X | 17A |
| | | | | | | | | | | | | | | | |
| GR-SB-24-3 | | | 250ml | 1 | | | | | | | | | | X | 18A |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN / CH2M HILL (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/8/94 10:00
Received by: Jim Mitchell Date/Time @ 4-8-94 @ 10:00 Am
Relinquished by: Jim Mitchell Date/Time @ 4-8-94 @ 11:00 Am
Received at Lab by: Date/Time 4/8/94 @ 11:00 Am
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ____________________ Date __________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

**Clayton**
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# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page 5 of 7 |
| Project No. | |
| Batch No. 9404074 | |
| Ind. Code | W.P. |
| Date Logged In 4/8/94 | By |

**REPORT RESULTS TO**
Name SCUWD | Title NEDDAL
Company | Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No. | Telefax No.

Purchase Order No. SCUWD | Client Job No.

**SEND INVOICE TO**
Name
Company | Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME (specify units)~~ | Number of Containers | STLC Pb, Cu | TCLP Pb, Cu | REACT. CN | REACT SULFIDE | ACUTE AQUATIC TOXIC | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-23-1 | 4/7/94 | SOIL | 250ml | 2 | X | X | | | | | | | | | 13 A, B([illegible] |
| GR-SB-23-1 | | | 250ml | 1 | | | X | X | | | | | | | C |
| GR-SB-23-1 | | | 60ml | 1 | | | | | X | | | | | | D |
| GR-SB-23-1 | | | BAG | 1 | | | | | | | | | | X | E |
| | | | | | | | | | | | | | | | |
| GR-SB-23-2 | | | 250ml | 1 | | | | | | | | | | X | 14A |
| | | | | | | | | | | | | | | | |
| GR-SB-23-3 | ↓ | ↓ | 250ml | 1 | | | | | | | | | | X | 15A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print) | Collector's Signature: John Ryan
Relinquished by: John Ryan | Date/Time 4/7/94 [illegible] | Received by: Lori Mitchell | Date/Time 4-8-94 @ 10:00am
Relinquished by: Lori Mitchell | Date/Time 4-8-94 @ 11:00AM | Received at Lab by: Tracy B Bullock | Date/Time 4/8/94 @ [illegible]
Method of Shipment: | Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, 3375
(313) 770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleasant A 94566
(510) 426 7

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayt counting
PINK - Client ains

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| **For Clayton Use Only** | Page 1 of 7 |
| Project No. | |
| Batch No. 9404074 | |
| Ind. Code | W.P. |
| Date Logged In 4/8/94 | By |

REPORT RESULTS TO
Name SCUWD
Title NEDDAL
Company
Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No. SCUWD
Client Job No.

SEND INVOICE TO
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | ~~AIR VOLUME~~ ~~(specify units)~~ | Number of Containers | STLC Pb, Cu | TCLP Cu, Pb | REACT. CN | REACT SULFIDE | ACUTE AQUATIC TOX | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-22-1 | 4/7/94 | SOIL | 250ml | 1 | | | | | | | | | | X | 10A |
| | | | | | | | | | | | | | | | |
| GR-SB-22-2 | | | 250ml | 1 | X | | | | | | | | | | 11 A |
| GR-SB-22-2 | | | 250ml | 1 | | | X | X | | | | | | | B |
| GR-SB-22-2 | | | 60ml | 1 | | | | | X | | | | | | C |
| GR-SB-22-2 | | | BAG | 1 | | | | | | | | | | X | ↓ D |
| | | | | | | | | | | | | | | | |
| GR-SB-22-3 | ↓ | ↓ | 250ml | 1 | | | | | | | | | | X | 12A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN / CH2M (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/8/94 14:00
Received by: Jim Mitchell Date/Time @ 4-8-94 @ 10:00 AM
Relinquished by: Date/Time
Received at Lab by: Date/Time 4/8/94 @ 1105 Am
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date __________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

2/92

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only    Page 3 of 7

| | |
|---|---|
| Project No. | |
| Batch No. 9404074 | |
| Ind. Code | W.P. |
| Date Logged In 4/8/94 | By |

EPORT RESULTS TO
Name SCVWD    Title NEDDAL
Company    Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No.    Telefax No.

Purchase Order No.    Client Job No.

SEND INVOICE TO
Name SCVWD
Company    Dept.
Address
City, State, Zip

Date Results Req.:    Rush Charges Authorized? ☐ Yes ☐ No    Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME (specify units)~~ | Number of Containers | STLC Pb, Cu | TCLP Cu, Pb | REACT. CN | REACT. SULFIDE | ACUTE AQUATIC TOXIC | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-21-1 | 4-7-94 | SOIL | 250 ml | 1 | | | | | | | | | | X | 07A |
| GR-SB-21-2 | | | 250 ml | 1 | | | | | | | | | | X | 08A |
| GR-SB-21-3 | | | 250 ml | 2 | X | X | | | | | | | | | 09A,B (DUPL) |
| GR-SB-21-3 | | | 250 ml | 1 | | | X | X | | | | | | | C |
| GR-SB-21-3 | | | 60 ml | 1 | | | | | X | | | | | | D |
| GR-SB-21-3 | | | BAG | 1 | | | | | | | | | | X | E |

CHAIN OF CUSTODY
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan    Date/Time 4/8/94 10:00
Received by: Ann Mitchell    Date/Time @ 4-8-94 10:00am
Relinquished by: Ann Mitchell    Date/Time 4-8-94 @ 11:00Am
Received at Lab by:    Date/Time 4/8/94 11:00
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date __________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, M 75
(313) 34 /70

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleasanto 94566
(510) 426-

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Claytor ounting
PINK - Client

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page [illegible] of 7 |
| Project No. | |
| Batch No. | 9404074 |
| Ind. Code | W.P. |
| Date Logged In 4/8/94 | By |

GUADALUPE RIVER PROJECT

**REPORT RESULTS TO**
Name SCVWD Title NEDDAL
Company Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No. Telefax No.

Purchase Order No. Client Job No.

**SEND INVOICE TO**
Name SCVWD
Company Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added.

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME~~ (specify units) | Number of Containers | STLC Cu, Pb | REACT. CN | REACT. SULFIDE | ACUTE AQUATIC TOXICITY | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-20-1 | 4/7/94 | SOIL | 250 ml | 1 | | | | | | | | | | X | 04A |
| | | | | | | | | | | | | | | | |
| GR-SB-20-2 | ↓ | ↓ | 250 ml | 1 | X | | | | | | | | | | 05 A |
| GR-SB-20-2 | | | 250 ml | 1 | | X | X | | | | | | | | B |
| GR-SB-20-2 | | | 160 ml | 1 | | | | X | | | | | | | C |
| GR-SB-20-2 | | | SIEVE | 1 | | | | | | | | | | X | D |
| | | | | | | | | | | | | | | | |
| GR-SB-20-3 | | | 250 ml | 1 | | | | | | | | | | X | 06A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/8/94 10:00
Received by: Lee Mitchell Date/Time 4-8-94 @ 10:00AM
Relinquished by: Lee Mitchell Date/Time 4-8-94 @ 11:00AM
Received at Lab by: Tracy B Bullock Date/Time 4/8/94
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laborato
YELLOW - Clayton Accounti
PINK - Client Retains

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page 1 of 7
Project No.
Batch No. 94U4074
Ind. Code
W.P.
Date Logged In 4/8/94
By

GUADALUPE RIVER PROJECT

REPORT RESULTS TO
Name SCVWD
Title NEDDAL
Company
Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No.
Client Job No.

SEND INVOICE TO
Name
Company SCVWD
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.) MEET ALL REQUIREMENTS FOR RCRA

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER AIR VOLUME ~~(specify units)~~ | Number of Containers | STLC Cu,Pb | TCLP Cu,Pb | ACUTE AQUATIC TOXICITY | REACT. Pb | REACT. CN | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-19-1 | 4/7/94 | SOIL | 250ml | 1 | | | | | | | | | | X | 01A |
| | | | | | | | | | | | | | | | |
| GR-SB-19-2 | | | 250ml | 2 | X | X | | | | | | | | | 02A,B |
| GR-SB-19-2 | | | 250ml | 1 | | | | X | X | | | | | | C |
| GR-SB-19-2 | | | 60ml | 1 | | | X | | | | | | | | D |
| GR-SB-19-2 | | | BAG 5PPL | 1 | | | | | | | | | | X | E |
| | | | | | | | | | | | | | | | |
| GR-SB-19-3 | | | 250ml | 1 | | | | | | | | | | X | 03A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan — Date/Time 4/8/94 10:00
Received by: Mitchell — Date/Time 4-8-94 @ 10:00am
Relinquished by: Mitchell — Date/Time 4-8-94 @ 11:00 Am
Received at Lab by: — Date/Time 4/8/94 1100
Method of Shipment:
Sample Condition Upon Receipt: ☑ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Nc 1 48375
(3. .44-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleas on, CA 94566
(510) 2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - C Retains

# WESTERN BIOASSAY LABORATORY
# FISH BIOASSAY MEASUREMENTS

## Fathead Minnow

For: Clayton Environmental Consultants

Sample ID#: 12555-60 Stock Date: 4/15/94

Client ID#: GR-SB- 20-2, 21-3, 22-2, 23-1, 24-1, 15-3

| | | | | | |
|---|---|---|---|---|---|
| Average Length: | 33.0 | mm SL | Average Weight: | 0.52 | g |
| Standard D. (S): | 1.49 | mm SL | Standard D. (S): | 0.091 | g |
| Maximum Length: | 37.0 | mm SL | Maximum Weight: | 0.74 | g |
| Minimum Length: | 32.0 | mm SL | Minimum Weight: | 0.42 | g |

| Fish Length (mm SL) | | Fish Weight (g) | |
|---|---|---|---|
| 1. | 33.0 | 1. | 0.54 |
| 2. | 37.0 | 2. | 0.74 |
| 3. | 33.0 | 3. | 0.45 |
| 4. | 32.0 | 4. | 0.42 |
| 5. | 32.0 | 5. | 0.47 |
| 6. | 32.0 | 6. | 0.49 |
| 7. | 32.0 | 7. | 0.46 |
| 8. | 33.0 | 8. | 0.56 |
| 9. | 33.0 | 9. | 0.48 |
| 10. | 33.0 | 10. | 0.55 |

Remarks:

Measured: 4/19/94

# WESTERN BIOASSAY LABORATORY
# FISH BIOASSAY MEASUREMENTS

## Fathead Minnow

For: Clayton Environmental Consultants

Sample ID#: 12549-54 Stock Date: 4/13/94

Client ID#: GR-SB- 13-1, 14-3, 16-3, 17-1, 18-2, 19-2

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| Average Length: | 33.3 | mm SL | Average Weight: | 0.45 | g |
| Standard D. (S): | 1.64 | mm SL | Standard D. (S): | 0.036 | g |
| Maximum Length: | 37.0 | mm SL | Maximum Weight: | 0.53 | g |
| Minimum Length: | 31.0 | mm SL | Minimum Weight: | 0.39 | g |

|  | Fish Length (mm SL) |  | Fish Weight (g) |
|---|---|---|---|
| 1. | 34.0 | 1. | 0.43 |
| 2. | 37.0 | 2. | 0.48 |
| 3. | 33.0 | 3. | 0.45 |
| 4. | 33.0 | 4. | 0.45 |
| 5. | 32.0 | 5. | 0.46 |
| 6. | 33.0 | 6. | 0.39 |
| 7. | 34.0 | 7. | 0.46 |
| 8. | 34.0 | 8. | 0.53 |
| 9. | 31.0 | 9. | 0.43 |
| 10. | 32.0 | 10. | 0.46 |

Remarks:

Measured: 4/18/94

Westeri . ·assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC . TE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

| | | | | | |
|---|---|---|---|---|---|
| CLIENT: | Clayton Environmental Consultants | | ATTENTION: | Suzanne Silvera | |
| SAMPLE ID#: | 12560 | SAMPLE DESCRIPTION: soil | TESTING DATES: | 4/18/94 | to 4/22/94 |
| CLIENT ID#: | GR-SB-15-3 | | | | |

| | 4/18/94 INITIAL | | | | 4/19/94 24-HOUR | | | | 4/20/94 48-HOUR | | | | 4/21/94 72-HOUR | | | | 4/22/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.6 | 9.1 | 19.8 | 10 | 7.8 | 7.8 | 19.5 | 10 | 7.8 | 7.8 | 19.6 | 10 | 7.8 | 7.7 | 19.0 | 10 | 7.8 | 7.6 | 18.7 |
| Control-B | 10 | 7.8 | 9.1 | 19.7 | 10 | 7.7 | 7.6 | 19.5 | 10 | 7.7 | 7.8 | 19.6 | 10 | 7.7 | 6.7 | 19.0 | 10 | 7.7 | 7.5 | 19.3 |
| 250-A | 10 | 7.6 | 9.1 | 19.5 | 10 | 7.5 | 8.0 | 19.2 | 10 | 7.9 | 7.0 | 19.2 | 10 | 7.2 | 6.9 | 18.7 | 10 | 7.2 | 7.5 | 19.3 |
| 250-B | 10 | 7.6 | 9.1 | 19.5 | 10 | 7.5 | 7.6 | 19.2 | 10 | 7.8 | 7.1 | 19.3 | 10 | 7.2 | 6.9 | 18.8 | 10 | 7.2 | 7.4 | 19.3 |
| 500-A | 10 | 7.7 | 9.1 | 19.5 | 10 | 7.5 | 7.4 | 19.1 | 10 | 7.3 | 7.2 | 19.3 | 10 | 7.2 | 6.9 | 18.9 | 10 | 7.2 | 7.3 | 19.3 |
| 500-B | 10 | 7.7 | 9.1 | 19.6 | 10 | 7.4 | 7.4 | 19.2 | 10 | 7.4 | 7.2 | 19.2 | 10 | 7.2 | 7.0 | 19.0 | 10 | 7.2 | 7.4 | 19.3 |
| 750-A | 10 | 7.6 | 9.1 | 19.6 | 10 | 7.4 | 7.2 | 19.2 | 10 | 7.3 | 6.9 | 19.1 | 10 | 7.1 | 6.9 | 18.8 | 10 | 7.2 | 7.5 | 19.2 |
| 750-B | 10 | 7.6 | 9.1 | 19.6 | 10 | 7.4 | 7.3 | 19.2 | 10 | 7.3 | 6.9 | 19.1 | 10 | 7.1 | 6.8 | 18.8 | 10 | 7.2 | 7.5 | 19.2 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 35, 42; 750 mg/L = 47, 55

Final Alkalinity, Hardness (mg/L): Control = 35, 42; 750 mg/L = 49, 56

Test Supervisor:

Verification:

WBL

HAZWASTE

Western assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

STATIC , TE BIOASSAY
Hazardous Waste Test
Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12559
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/18/94 to 4/22/94
CLIENT ID#: GR-SB-24-1

| | 4/18/94 INITIAL | | | | 4/19/94 24-HOUR | | | | 4/20/94 48-HOUR | | | | 4/21/94 72-HOUR | | | | 4/22/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.6 | 9.1 | 19.8 | 10 | 7.8 | 7.8 | 19.5 | 10 | 7.8 | 7.8 | 19.6 | 10 | 7.8 | 7.7 | 19.0 | 10 | 7.8 | 7.6 | 18.7 |
| Control-B | 10 | 7.8 | 9.1 | 19.7 | 10 | 7.7 | 7.6 | 19.5 | 10 | 7.7 | 7.8 | 19.6 | 10 | 7.7 | 6.7 | 19.0 | 10 | 7.7 | 7.5 | 19.3 |
| 250-A | 10 | 7.7 | 9.1 | 19.5 | 10 | 7.6 | 8.2 | 19.1 | 10 | 7.4 | 7.0 | 19.0 | 10 | 7.6 | 8.2 | 19.1 | 10 | 7.6 | 7.7 | 19.3 |
| 250-B | 10 | 7.7 | 9.1 | 19.6 | 10 | 7.6 | 8.2 | 19.3 | 10 | 7.4 | 7.0 | 19.1 | 10 | 7.5 | 7.3 | 19.1 | 10 | 7.6 | 7.7 | 19.3 |
| 500-A | 10 | 7.7 | 9.1 | 19.6 | 10 | 7.5 | 8.5 | 19.3 | 10 | 7.3 | 6.4 | 19.1 | 10 | 7.4 | 7.0 | 19.0 | 10 | 7.5 | 7.7 | 19.3 |
| 500-B | 10 | 7.7 | 9.1 | 19.5 | 10 | 7.5 | 8.5 | 19.3 | 10 | 7.4 | 6.5 | 19.1 | 10 | 7.3 | 6.9 | 18.8 | 10 | 7.5 | 7.8 | 19.3 |
| 750-A | 10 | 7.7 | 9.1 | 19.5 | 10 | 7.4 | 8.5 | 19.3 | 10 | 7.3 | 5.9 | 19.1 | 10 | 7.3 | 6.8 | 18.9 | 10 | 7.4 | 8.0 | 19.3 |
| 750-B | 10 | 7.7 | 9.1 | 19.5 | 10 | 7.4 | 8.6 | 19.3 | 10 | 7.4 | 6.0 | 19.1 | 10 | 7.2 | 6.8 | 18.9 | 10 | 7.4 | 7.9 | 19.3 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 35, 42; 750 mg/L = 45, 52
Final Alkalinity, Hardness (mg/L): Control = 35, 42; 750 mg/L = 36, 50

Test Supervisor:
Verification:

'ASTE

WBL

**Westeri assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

# STATIC , TE BIOASSAY
## Hazardous Waste Test
Fathead Minnow

CLIENT: Clayton Environmental Consultants

ATTENTION: Suzanne Silvera

SAMPLE ID#: 12558

SAMPLE DESCRIPTION: soil

TESTING DATES: 4/15/94 to 4/19/94

CLIENT ID#: GR-SB-23-1

| | 4/15/94 INITIAL | | | | 4/16/94 24-HOUR | | | | 4/17/94 48-HOUR | | | | 4/18/94 72-HOUR | | | | 4/19/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.8 | 19.3 | 10 | 7.3 | 7.8 | 19.9 | 10 | 7.8 | 7.1 | 19.2 | 10 | 7.2 | 7.0 | 18.6 |
| Control-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.9 | 19.3 | 10 | 7.6 | 7.7 | 19.9 | 10 | 7.9 | 6.9 | 19.1 | 10 | 7.2 | 6.8 | 18.4 |
| 250-A | 10 | 7.7 | 9.1 | 21.4 | 10 | 7.7 | 8.9 | 19.3 | 10 | 7.7 | 7.9 | 20.2 | 10 | 7.6 | 8.0 | 19.2 | 10 | 7.2 | 7.3 | 18.3 |
| 250-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.9 | 19.3 | 10 | 7.8 | 7.9 | 20.2 | 10 | 7.6 | 7.9 | 19.2 | 10 | 7.2 | 7.2 | 18.3 |
| 500-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.0 | 19.3 | 10 | 7.7 | 8.1 | 20.2 | 10 | 7.6 | 7.7 | 19.2 | 10 | 7.2 | 7.1 | 18.5 |
| 500-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.9 | 19.3 | 10 | 7.7 | 8.1 | 20.1 | 10 | 7.6 | 7.4 | 19.3 | 10 | 7.2 | 6.8 | 18.5 |
| 750-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.9 | 19.3 | 10 | 7.7 | 8.3 | 20.1 | 10 | 7.6 | 7.4 | 19.3 | 10 | 7.1 | 6.8 | 18.7 |
| 750-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.9 | 19.3 | 10 | 7.5 | 8.3 | 20.1 | 10 | 7.6 | 7.7 | 19.2 | 10 | 7.1 | 7.0 | 18.5 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 35, 44; 750 mg/L = 42, 45

Final Alkalinity, Hardness (mg/L): Control = 36, 44; 750 mg/L = 62, 52

Test Supervisor:

Verification:

WBL

HAZWASTE

Western assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC . TE BIOASSAY
### Hazardous Waste Test
### Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera

SAMPLE ID#: 12557 SAMPLE DESCRIPTION: soil TESTING DATES: 4/15/94 to 4/19/94

CLIENT ID#: GR-SB-22-2

| | 4/15/94 | | | | 4/16/94 | | | | 4/17/94 | | | | 4/18/94 | | | | 4/19/94 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INITIAL | | | | 24-HOUR | | | | 48-HOUR | | | | 72-HOUR | | | | 96-HOUR,FINAL | | | |
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.8 | 19.3 | 10 | 7.3 | 7.8 | 19.9 | 10 | 7.8 | 7.1 | 19.2 | 10 | 7.2 | 7.0 | 18.6 |
| Control-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.9 | 19.3 | 10 | 7.6 | 7.7 | 19.9 | 10 | 7.9 | 6.9 | 19.1 | 10 | 7.2 | 6.8 | 18.4 |
| 250-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.0 | 19.3 | 10 | 7.8 | 8.0 | 20.1 | 10 | 7.6 | 7.7 | 19.1 | 10 | 7.2 | 7.1 | 18.4 |
| 250-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.8 | 19.3 | 10 | 7.9 | 7.9 | 20.0 | 10 | 7.7 | 7.8 | 19.0 | 10 | 7.2 | 7.2 | 18.3 |
| 500-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.6 | 19.3 | 10 | 7.9 | 8.0 | 20.0 | 10 | 7.7 | 7.8 | 19.1 | 10 | 7.2 | 7.2 | 18.4 |
| 500-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.8 | 19.3 | 10 | 7.9 | 8.0 | 19.9 | 10 | 7.7 | 7.8 | 19.1 | 10 | 7.2 | 7.1 | 18.5 |
| 750-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.8 | 19.3 | 10 | 7.9 | 8.0 | 19.9 | 10 | 7.7 | 7.7 | 19.1 | 10 | 7.2 | 6.9 | 18.7 |
| 750-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.8 | 19.3 | 10 | 7.9 | 8.0 | 20.1 | 10 | 7.7 | 7.5 | 19.1 | 10 | 7.2 | 7.0 | 18.3 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 35, 44; 750 mg/L = 37, 51

Final Alkalinity, Hardness (mg/L): Control = 36, 44; 750 mg/L = 47, 42

Test Supervisor:

Verification:

Western [illegible]assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC [illegible]TE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12556
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/15/94 to 4/19/94
CLIENT ID#: GR-SB-21-3

| | 4/15/94 INITIAL | | | | 4/16/94 24-HOUR | | | | 4/17/94 48-HOUR | | | | 4/18/94 72-HOUR | | | | 4/19/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.8 | 19.3 | 10 | 7.3 | 7.8 | 19.9 | 10 | 7.8 | 7.1 | 19.2 | 10 | 7.2 | 7.0 | 18.6 |
| Control-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.9 | 19.3 | 10 | 7.6 | 7.7 | 19.9 | 10 | 7.9 | 6.9 | 19.1 | 10 | 7.2 | 6.8 | 18.4 |
| 250-A | 10 | 7.5 | 9.1 | 21.4 | 10 | 7.5 | 8.6 | 19.3 | 10 | 7.5 | 7.8 | 20.9 | 10 | 7.8 | 6.0 | 19.2 | 10 | 7.2 | 5.7 | 18.4 |
| 250-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.6 | 19.3 | 10 | 7.6 | 7.8 | 20.6 | 10 | 7.8 | 6.0 | 19.3 | 10 | 7.2 | 5.9 | 18.5 |
| 500-A | 10 | 7.5 | 9.1 | 21.4 | 10 | 7.6 | 8.6 | 19.3 | 10 | 7.8 | 7.9 | 20.1 | 10 | 7.5 | 8.0 | 19.2 | 10 | 7.0 | 6.9 | 18.5 |
| 500-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.8 | 19.3 | 10 | 7.9 | 7.9 | 20.0 | 10 | 7.7 | 7.9 | 19.1 | 10 | 7.3 | 6.8 | 18.5 |
| 750-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.7 | 8.7 | 19.3 | 10 | 7.9 | 7.8 | 19.9 | 10 | 7.7 | 7.9 | 19.2 | 10 | 7.3 | 7.0 | 18.7 |
| 750-B | 10 | 7.9 | 9.1 | 21.4 | 10 | 7.9 | 8.6 | 19.3 | 10 | 8.0 | 7.8 | 19.9 | 10 | 7.8 | 7.6 | 19.1 | 10 | 7.3 | 6.9 | 18.6 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 35, 44; 750 mg/L = 32, 55
Final Alkalinity, Hardness (mg/L): Control = 36, 44; 750 mg/L = 52, 44

Test Supervisor:
Verification:

HAZWASTE

Western [illegible]assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC [illegible]TE BIOASSAY
### Hazardous Waste Test
### Fathead Minnow

| | | | | | |
|---|---|---|---|---|---|
| CLIENT: | Clayton Environmental Consultants | | ATTENTION: | Suzanne Silvera | |
| SAMPLE ID#: | 12555 | SAMPLE DESCRIPTION: soil | TESTING DATES: | 4/15/94 | to 4/19/94 |
| CLIENT ID#: | GR-SB-20-2 | | | | |

| | 4/15/94 | | | | 4/16/94 | | | | 4/17/94 | | | | 4/18/94 | | | | 4/19/94 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INITIAL | | | | 24-HOUR | | | | 48-HOUR | | | | 72-HOUR | | | | 96-HOUR,FINAL | | | |
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.8 | 19.3 | 10 | 7.3 | 7.8 | 19.9 | 10 | 7.8 | 7.1 | 19.2 | 10 | 7.2 | 7.0 | 18.6 |
| Control-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.6 | 8.9 | 19.3 | 10 | 7.6 | 7.7 | 19.9 | 10 | 7.9 | 6.9 | 19.1 | 10 | 7.2 | 6.8 | 18.4 |
| 250-A | 10 | 7.5 | 9.1 | 21.4 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.6 | 7.8 | 20.0 | 10 | 7.8 | 7.0 | 19.1 | 10 | 7.2 | 7.0 | 18.5 |
| 250-B | 10 | 7.5 | 9.1 | 21.4 | 10 | 7.5 | 8.6 | 19.3 | 10 | 7.6 | 7.8 | 19.9 | 10 | 7.8 | 7.1 | 19.1 | 10 | 7.2 | 7.0 | 18.7 |
| 500-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.6 | 19.3 | 10 | 7.5 | 7.8 | 19.9 | 10 | 7.8 | 6.8 | 19.2 | 10 | 7.2 | 6.9 | 18.8 |
| 500-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.0 | 19.3 | 10 | 7.5 | 7.7 | 20.0 | 10 | 7.8 | 6.5 | 19.2 | 10 | 7.2 | 6.3 | 18.5 |
| 750-A | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.0 | 19.3 | 10 | 7.5 | 7.7 | 20.4 | 10 | 7.8 | 6.5 | 19.1 | 10 | 7.2 | 6.2 | 18.5 |
| 750-B | 10 | 7.6 | 9.1 | 21.4 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.4 | 7.7 | 20.2 | 10 | 7.8 | 6.6 | 19.2 | 10 | 7.2 | 6.5 | 18.5 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 35, 44; 750 mg/L = 32, 66

Final Alkalinity, Hardness (mg/L): Control = 36, 44; 750 mg/L = 47, 61

Test Supervisor:

Verification:

'ASTE

WBL

**Westerı ›assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC JTE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12554
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/14/94 to 4/18/94
CLIENT ID#: GR-SB-19-2

| | 4/14/94 INITIAL | | | | 4/15/94 24-HOUR | | | | 4/16/94 48-HOUR | | | | 4/17/94 72-HOUR | | | | 4/18/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 6.7 | 9.1 | 19.4 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.6 | 7.6 | 19.4 | 10 | 7.2 | 8.9 | 19.0 |
| Control-B | 10 | 6.8 | 9.1 | 19.4 | 10 | 7.4 | 8.2 | 19.1 | 10 | 7.6 | 8.2 | 19.3 | 10 | 7.7 | 7.7 | 19.2 | 10 | 7.4 | 8.7 | 19.0 |
| 250-A | 10 | 7.5 | 9.1 | 20.2 | 10 | 7.2 | 8.3 | 19.9 | 10 | 7.3 | 8.3 | 19.3 | 10 | 7.3 | 7.8 | 20.2 | 10 | 7.3 | 7.0 | 19.2 |
| 250-B | 10 | 7.4 | 9.1 | 20.2 | 10 | 7.3 | 8.3 | 19.9 | 10 | 7.3 | 8.3 | 19.3 | 10 | 7.3 | 7.6 | 20.1 | 10 | 7.4 | 6.8 | 19.2 |
| 500-A | 10 | 7.4 | 9.1 | 20.2 | 10 | 7.3 | 8.8 | 19.8 | 10 | 7.3 | 8.6 | 19.3 | 10 | 7.4 | 7.4 | 20.1 | 10 | 7.4 | 6.9 | 19.2 |
| 500-B | 10 | 7.4 | 9.1 | 20.2 | 10 | 7.3 | 8.8 | 19.7 | 10 | 7.3 | 8.6 | 19.3 | 10 | 7.4 | 7.6 | 20.0 | 10 | 7.4 | 7.1 | 19.1 |
| 750-A | 10 | 7.4 | 9.1 | 20.2 | 10 | 7.3 | 8.6 | 19.7 | 10 | 7.3 | 7.9 | 19.3 | 10 | 7.2 | 7.3 | 20.0 | 10 | 7.4 | 7.3 | 19.1 |
| 750-B | 10 | 7.4 | 9.1 | 20.1 | 10 | 7.2 | 8.8 | 19.7 | 10 | 7.3 | 8.4 | 19.3 | 10 | 7.2 | 7.4 | 20.0 | 10 | 7.4 | 7.1 | 19.1 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 27, 40; 750 mg/L = 36, 63
Final Alkalinity, Hardness (mg/L): Control = 33, 44; 750 mg/L = 37, 60

Test Supervisor:
Verification:

HAZWASTE

WBL

Sample #12560:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

The transcribed data sheets and chain-of-custody for these tests are enclosed. If you have any questions concerning this report please contact Linda Mortensen, Hazardous Waste and Acute Effluent Testing Specialist, at the lab (510) 686-3215.

Sample #12554:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12555-58:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12555:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

Sample #12556:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

Sample #12557:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

Sample #12558:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12559-60:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12559:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

**SUMMARY:**

Sample #12549-54:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12549:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12550:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12551:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12552:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12553:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

WESTERN BIOASSAY LABORATORIES

**Date:** April 22, 1994

**To:**
Ms. Suzanne Silvera
Clayton Environmental Consultants
1252 Quary Lane
Pleasanton, CA 94566

**From:**
Linda S. Mortensen
Hazardous Waste and Acute Effluent
Testing Specialist

Julianne C. Fegley
Laboratory Coordinator

**Subject:** Aquatic Toxicity Testing Results for Hazardous Waste Testing
P.O.#48508

---

**SAMPLE MATRIX AND I.D.:** Twelve solid samples #12549 (GR-SB-13-1), #12550 (GR-SB-14-3), #12551 (GR-SB-16-3), #12552 (GR-SB-17-1), #12553 (GR-SB-18-2), #12554 (GR-SB-19-2), #12555 (GR-SB-20-2), #12556 (GR-SB-21-3), #12557 (GR-SB-22-2), #12558 (GR-SB-23-1), #12559 (GR-SB-24-1) and #12560 (GR-SB-15-3).

**TREATMENT DILUTIONS (mg/L):** 250, 500, 750 and Control run in soft carbon filtered tap water mixed with deionized water of 40-48 mg/L hardness and in duplicate with 10 fish/6 L tank and 20 fish/treatment.

**TESTING PERIOD:** Received 4/8/94; Tested 4/14/94 - 4/18/94 and 4/15/94 - 4/19/94.
Tested 4/18/94 - 4/22/94

**BIOASSAY TEST(S):** Fathead minnow (*Pimephales promelas*) 96-hour static Hazardous Waste Toxicity.

**METHODS:** WBL's hazardous waste aquatic toxicity test protocol based on "Standard Methods for the Examination of Water and Wastewater", 18th Edition, American Public Health Association, 1992; California's Title 22 Code, Section #66261.24(a)(6); "Static Acute Bioassay Procedures for Hazardous Waste Samples" (Polisini and Miller, 1988), California Department of Fish and Game; and as certified by the State of California's Department of Toxic Substance Control (CA. EPA).

T-22.SCN

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

|  |  |  |  |
|---|---|---|---|
| Sample Identification: | METHOD BLANK | Date Sampled: | -- |
| Lab Number: | 9404074-22 | Date Received: | -- |
| Sample Matrix/Media: | SOIL |  |  |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | <0.1 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | <0.1 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

: Not detected at or above limit of detection
-: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-15-3 | Date Sampled: | 04/07/94 |
| Lab Number: | 9404074-21 | Date Received: | 04/08/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 2.1 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 12 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

: Not detected at or above limit of detection
--: Information not available or not applicable

# Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-24-1 | Date Sampled: | 04/07/94 |
| Lab Number: | 9404074-16 | Date Received: | 04/08/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.6 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 1.4 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-23-1 | Date Sampled: | 04/07/94 |
| Lab Number: | 9404074-13 | Date Received: | 04/08/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.3 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 0.8 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

. Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

Sample Identification: GR-SB-22-2
Lab Number: 9404074-11
Sample Matrix/Media: SOIL

Date Sampled: 04/07/94
Date Received: 04/08/94

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.3 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 0.2 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-21-3 | Date Sampled: | 04/07/94 |
| Lab Number: | 9404074-09 | Date Received: | 04/08/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.8 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 2.9 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-20-2 | Date Sampled: | 04/07/94 |
| Lab Number: | 9404074-05 | Date Received: | 04/08/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 1.5 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 1.9 | 0.1 | mg/L | 04/14/94 | 04/15/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-4-3015-107
Clayton Project No. 94040.74

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-19-2 | Date Sampled: | 04/07/94 |
| Lab Number: | 9404074-02 | Date Received: | 04/08/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.3 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 0.7 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

<: Not detected at or above limit of detection
--: Information not available or not applicable

**Western Operations**

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

**Clayton**
ENVIRONMENTAL
CONSULTANTS

April 25, 1994

Ms. Charleen Renati
Environmental Compliance Department
SANTA CLARA VALLEY WATER DISTRICT
5750 Almaden Expressway
San Jose, CA 95118

Client Ref.: 94-4-3015-107
Clayton Project No.: 94040.74

Dear Ms. Renati:

Enclosed are our analytical laboratory report and quality assurance data package for the samples received on April 8, 1994. Acute Aquatic Toxicity analysis was performed by Western Bioassay. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of after June 24, 1994, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley

Harriotte A. Hurley, CIH
Director, Laboratory Services
Western Operations

HAH/tjb

Attachments

# Quality Assurance Results Summary
for
Clayton Project No. 94040.73

| | | | |
|---|---|---|---|
| Clayton Lab Number: | 9404074-21C | Analytical Method: | EPA9010 |
| Ext./Prep. Method: | EPA9010 | Instrument ID: | 07487 |
| Date: | 04/14/94 | Date: | 04/14/94 |
| Analyst: | MCN | Time: | 09:30 |
| Std. Source: | MALL 6881 | Analyst: | MCN |
| Sample Matrix/Media: | SOIL | Units: | mg/kg |

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CYANIDE | ND | 10.0 | 10.2 | 102 | 9.93 | 99 | 101 | 58 | 135 | 2.6 | 25 |

LCS = Laboratory Control Sample
Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.73

| | |
|---|---|
| Clayton Lab Number: | 9404073-01A |
| Ext./Prep. Method: | EPA3010 |
| Date: | 04/14/94 |
| Analyst: | RAH |
| Std. Source: | VHG301959R2 |
| Sample Matrix/Media: | STLC |

| | |
|---|---|
| Analytical Method: | EPA6010 |
| Instrument ID: | 03891 |
| Date: | 04/15/94 |
| Time: | 12:37 |
| Analyst: | RAH |
| Units: | MG/L |

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER | 25.4 | 10.0 | 34.8 | 94 | 34.9 | 95 | 95 | 75 | 125 | 0.3 | 20 |
| LEAD | 10.2 | 10.0 | 18.9 | 87 | 18.8 | 86 | 87 | 75 | 125 | 0.5 | 20 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 94040.73

| | |
|---|---|
| Clayton Lab Number: | 9404073-01A |
| Ext./Prep. Method: | EPA3010 |
| Date: | 04/14/94 |
| Analyst: | RAH |
| Std. Source: | A931201 |
| Sample Matrix/Media: | TCLP |

| | |
|---|---|
| Analytical Method: | EPA6010 |
| Instrument ID: | 03891 |
| Date: | 04/15/94 |
| Time: | 12:00 |
| Analyst: | RAH |
| Units: | MG/L |

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER | 0.490 | 10.0 | 10.4 | 99 | 10.3 | 98 | 99 | 75 | 125 | 1.0 | 20 |
| LEAD | ND | 5.00 | 4.53 | 91 | 4.51 | 90 | 90 | 75 | 125 | 0.4 | 20 |

LCS = Laboratory Control Sample
Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.73

Clayton Lab Number: 9404073-01C
Ext./Prep. Method: EPA7.3.4.2
Date: 04/18/94
Analyst: HYW
Std. Source: BAKER #61170
Sample Matrix/Media: SOIL

Analytical Method: EPA7_3_4_2
Instrument ID: 00008
Date: 04/19/94
Time: 12:00
Analyst: HYW
Units: mg/Kg

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| REACTIVE SULFIDE | ND | 272 | 260 | 96 | 250 | 92 | 94 | 75 | 125 | 3.9 | 25 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Clayton
ENVIRONMENTAL
CONSULTANTS

# Quality Assurance Results Summary
# Matrix Spike/Matrix Spike Duplicate Results
# for
# Clayton Project No. 94040.73

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page _ of 5.
Project No.
Batch No. 9404073
Ind. Code
W.P.
Date Logged In 4/8/94
By

SCVWP

REPORT RESULTS TO
Name ~~JOHN RYAN~~ Title NEDDAL
Company CH2M HILL Dept.
Mailing Address
City, State, Zip
Telephone No. Telefax No.

Purchase Order No. SC VWP Client Job No.

SEND INVOICE TO
Name
Company Dept.
Address
City, State, Zip

Date Results Req.:
Rush Charges Authorized? ☐ Yes ☐ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | ~~AIR VOLUME (specify units)~~ CONTAINER | Number of Containers | STLC Pb, Cu | ACUTE AQUATIC TOXICITY | REACT. CN | REACT. SULFIDE | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-18-1 | | SOIL | 250 ml | 1 | | | | | | | | | | X | ~~11A~~ 13A |
| | | | | | | | | | | | | | | | |
| GR-SB-18-2 | | | 250 ml | 1 | X | | | | | | | | | | ~~12A~~ 14A |
| GR-SB-18-2 | | | 250 ml | 1 | | | X | X | | | | | | | ~~B~~ B |
| GR-SB-18-2 | | | 60 ml | 1 | | X | | | | | | | | | ~~C~~ C |
| GR-SB-18-2 | | | BAG | 1 | | | | | | | | | | X | ~~D~~ D |
| | | | | | | | | | | | | | | | |
| GR-SB-18-3 | | | 250 ml | 1 | | | | | | | | | | X | ~~13A~~ 15A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/7/94 15.00
Received by: Mitchell Date/Time 4-7-94 @ 1500
Relinquished by: Mitchell Date/Time 4-7-94 @ 1635
Received at Lab by: Date/Time 4/7/94 4:3
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ____________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page 5 |
| Project No. | |
| Batch No. | 9404073 |
| Ind. Code | W.P. |
| Date Logged In 4/8/94 | By |

**REPORT RESULTS TO**
Name SCUWD
Title NEDDAL
Company
Dept.
Mailing Address
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No. SCUWD
Client Job No.

**SEND INVOICE TO**
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added.

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Pb, Cu | TCLP Pb, Cu | ACUTE AQUAT. TOX | REACT. CN- | REACT. SULFIDE | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-17-1 | | SOIL | 250 ml | 2 | X | X | | | | | | | | | 10A, B |
| GR-SB-17-1 | | | 250 ml | 1 | | | | X | X | | | | | | C |
| GR-SB-17-1 | | | 60 ml | 1 | | | X | | | | | | | | D |
| GR-SB-17-1 | | | 1 BAG | 1 | | | | | | | | | | X | E |
| GR-SB-17-2 | | | 250 ml | 1 | | | | | | | | | | X | 11 A |
| GR-SB-17-3 | | | 250 ml | 1 | | | | | | | | | | X | 12 A |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/7/94 15:00
Received by: Mitchell Date/Time 4-7-94 @ 1500
Relinquished by: Mitchell Date/Time 4-7-94 @ 1635
Received at Lab by: Date/Time 4/7/94 4:
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ____________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
MI 48375
, 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 6-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Retains

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**Clayton**
ENVIRONMENTAL
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# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page - 5 |
| Project No. | |
| Batch No. | 9404073 |
| Ind. Code | W.P. |
| Date Logged In 4/8/94 | By |

SCVWD

**REPORT RESULTS TO**
Name ~~JOHN RYAN~~ Title NEDDAL
Company CH2M HILL Dept.
Mailing Address
City, State, Zip
Telephone No. Telefax No.

Purchase Order No. SCVWD Client Job No.

**SEND INVOICE TO**
Name
Company Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED (Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | ~~AIR VOLUME~~ (specify units) | Number of Containers | STLC Pb, Cu | TCLP Pb Cu | AQUATIC TOXICITY | REACT. CN- | REACT SULFIDE | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-16-1 | 4/6/94 | SOIL | 250 ml | 1 | | | | | | | | | | X | 07A |
| GR-SB-16-2 | | | 250 ml | 1 | | | | | | | | | | X | 08A |
| GR-SB-16-3 | | | 250 ml | 1 | X | | | | | | | | | | 09A |
| GR-SB-16-3 | | | 250 ml | 1 | | | [illegible] | X | X | | | | | | B |
| GR-SB-16-3 | | | 60 ml | 1 | | | X | | | | | | | | C |
| GR-SB-16-3 | ↓ | ↓ | BAG | 1 | | | | | | | | | | X | ↓ D |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/7/94 15:00
Received by: Jim Mitchell Date/Time @ 4-7-94 1500
Relinquished by: Jim Mitchell Date/Time 4-7-94 @ 16:35
Received at Lab by: Date/Time 4/7/94 @ 4:35
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

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**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page 6 5
Project No.
Batch No. 9404073
Ind. Code
W.P.
Date Logged In 4/8/94
By

**REPORT RESULTS TO**
Name SCVWD
Title NEDDAL
Company CH2M HILL
Dept.
Mailing Address
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No. SCVWD
Client Job No.

**SEND INVOICE TO**
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (~~specify units~~) | Number of Containers | STLC Cu,Pb | AQUATIC TOXICITY | REACT. CN | REACT SULFIDE | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-14-1 | 4/6/94 | SOIL | 250ml | 1 | | | | | | | | | | X | 04A |
| GR-SB-14-2 | | | 250 ml | 1 | | | | | | | | | | X | 05A |
| GR-SB-14-3 | | | 250ml | 1 | X | | | | | | | | | | 06A |
| GR-SB-14-3 | | | 250ml | 1 | | | X | X | | | | | | | B |
| GR-SB-14-3 | | | 60ml | 1 | | X | | | | | | | | | C |
| GR-SB-14-3 | | | BAG | 1 | | | | | | | | | | X | D |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/7/94 15:00
Received by: Pam Mitchell Date/Time 4-7-94 @ 1500
Relinquished by: Pam Mitchell Date/Time 4-7-94 @ 1635
Received at Lab by: Date/Time 4/7/94 4:35
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ______
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
No 48375
(31 4-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasa n, CA 94566
(510) 657

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DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Cli etains

Clayton
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only | Page 1 , 3
Project No.
Batch No. 9404073
Ind. Code | W.P.
Date Logged In 4/8/94 | By

GUADALUPE RIVER PROJECT

REPORT RESULTS TO
Name SCVWD | Title NEDDAL
Company CH2M HILL | Dept.
Mailing Address
City, State, Zip
Telephone No. | Telefax No.

Purchase Order No. | Client Job No.

SEND INVOICE TO
Name SCVWD
Company | Dept.
Address
City, State, Zip

Date Results Req.:
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)
MEET AL DL FOR RCRA (TYP)

Explanation of Preservative:
★ SAVE ~~HOLD~~ FOR ADDITIONAL ANALYSES (TYP)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME~~ (specify units) | Number of Containers | STLC Cu,Pb | TCLP Cu,Pb | AQUATIC TOXICITY | REACT. CN- | REACT. SULFIDE | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-13-1 | 4/6/94 | SOIL | 250 ml | 2 | X | X | | | | | | | | | 01A,B (COMP) |
| GR-SB-13-1 | | | 250 ml | 1 | | | | X | X | | | | | ★ | ~~B~~ C |
| GR-SB-13-1 | | | 60 ml | 1 | | | X | | | | | | | | ~~C~~ D |
| GR-SB-13-1 | | | BAG 5# (PL) | 1 | | | | | | | | | | X | ~~D~~ E |
| | | | | | | | | | | | | | | | |
| GR-SB-13-2 | | | 250 ml | 1 | | | | | | | | | | X | 02A |
| | | | | | | | | | | | | | | | |
| GR-SB-13-3 | ✓ | ✓ | 250 ml | 1 | | | | | | | | | | X | 03A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan | Date/Time 4/7/94 15:00
Received by: Jim Mitchell | Date/Time 4-7-94 @ 1500
Relinquished by: Jim Mitchell | Date/Time 4-7-94 @ 1635
Received at Lab by: Tracy B | Date/Time 4/7/94 435 P
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

WBL

## WESTERN BIOASSAY LABORATORY
## FISH BIOASSAY MEASUREMENTS

### Fathead Minnow

For: Clayton Environmental Consultants

Sample ID#: 12549-54 Stock Date: 4/13/94

Client ID#: GR-SB- 13-1, 14-3, 16-3, 17-1, 18-2, 19-2

| | | | | | |
|---|---|---|---|---|---|
| Average Length: | 33.3 | mm SL | Average Weight: | 0.45 | g |
| Standard D. (S): | 1.64 | mm SL | Standard D. (S): | 0.036 | g |
| Maximum Length: | 37.0 | mm SL | Maximum Weight: | 0.53 | g |
| Minimum Length: | 31.0 | mm SL | Minimum Weight: | 0.39 | g |

| Fish Length (mm SL) | | Fish Weight (g) | |
|---|---|---|---|
| 1. | 34.0 | 1. | 0.43 |
| 2. | 37.0 | 2. | 0.48 |
| 3. | 33.0 | 3. | 0.45 |
| 4. | 33.0 | 4. | 0.45 |
| 5. | 32.0 | 5. | 0.46 |
| 6. | 33.0 | 6. | 0.39 |
| 7. | 34.0 | 7. | 0.46 |
| 8. | 34.0 | 8. | 0.53 |
| 9. | 31.0 | 9. | 0.43 |
| 10. | 32.0 | 10. | 0.46 |

Remarks:

Measured: 4/18/94

**Western [illegible]assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC [illegible]TE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12553
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/14/94 to 4/18/94
CLIENT ID#: GR-SB-18-2

| | 4/14/94 INITIAL | | | | 4/15/94 24-HOUR | | | | 4/16/94 48-HOUR | | | | 4/17/94 72-HOUR | | | | 4/18/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 6.7 | 9.1 | 19.4 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.6 | 7.6 | 19.4 | 10 | 7.2 | 8.9 | 19.0 |
| Control-B | 10 | 6.8 | 9.1 | 19.4 | 10 | 7.4 | 8.2 | 19.1 | 10 | 7.6 | 8.2 | 19.3 | 10 | 7.7 | 7.7 | 19.2 | 10 | 7.4 | 8.7 | 19.0 |
| 250-A | 10 | 7.4 | 9.1 | 20.1 | 10 | 7.3 | 8.3 | 19.6 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.4 | 8.0 | 20.7 | 10 | 7.3 | 8.2 | 19.2 |
| 250-B | 10 | 7.4 | 9.1 | 20.1 | 10 | 7.2 | 8.2 | 19.5 | 10 | 7.3 | 8.1 | 19.3 | 10 | 7.2 | 8.1 | 20.6 | 10 | 7.4 | 8.2 | 19.1 |
| 500-A | 10 | 7.4 | 9.1 | 20.0 | 10 | 7.2 | 8.3 | 19.7 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.3 | 8.0 | 20.6 | 10 | 7.4 | 6.5 | 19.1 |
| 500-B | 10 | 7.4 | 9.1 | 20.0 | 10 | 7.2 | 8.3 | 19.6 | 10 | 7.3 | 8.0 | 19.2 | 10 | 7.3 | 7.9 | 20.7 | 10 | 7.4 | 6.7 | 19.1 |
| 750-A | 10 | 7.5 | 9.1 | 20.1 | 10 | 7.1 | 8.2 | 19.9 | 10 | 7.3 | 8.0 | 19.2 | 10 | 7.2 | 7.9 | 20.8 | 10 | 7.3 | 8.0 | 19.2 |
| 750-B | 10 | 7.5 | 9.1 | 20.1 | 10 | 7.2 | 8.2 | 19.9 | 10 | 7.3 | 8.0 | 19.3 | 10 | 7.2 | 8.0 | 20.8 | 10 | 7.4 | 7.7 | 19.2 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 27, 40; 750 mg/L = 41, 93

Final Alkalinity, Hardness (mg/L): Control = 33, 44; 750 mg/L = 44, 47

Test Supervisor:

Verification:

HAZWASTE

WBL

Western [illegible]assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

# STATIC [illegible]TE BIOASSAY
## Hazardous Waste Test
Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12552
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/14/94 to 4/18/94
CLIENT ID#: GR-SB-17-1

| | 4/14/94 INITIAL | | | | 4/15/94 24-HOUR | | | | 4/16/94 48-HOUR | | | | 4/17/94 72-HOUR | | | | 4/18/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 6.7 | 9.1 | 19.4 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.6 | 7.6 | 19.4 | 10 | 7.2 | 8.9 | 19.0 |
| Control-B | 10 | 6.8 | 9.1 | 19.4 | 10 | 7.4 | 8.2 | 19.1 | 10 | 7.6 | 8.2 | 19.3 | 10 | 7.7 | 7.7 | 19.2 | 10 | 7.4 | 8.7 | 19.0 |
| 250-A | 10 | 7.4 | 9.1 | 19.7 | 10 | 7.2 | 8.2 | 19.4 | 10 | 7.4 | 8.0 | 19.2 | 10 | 7.4 | 8.2 | 20.0 | 10 | 7.3 | 8.0 | 19.1 |
| 250-B | 10 | 7.4 | 9.1 | 19.7 | 10 | 7.2 | 8.2 | 19.3 | 10 | 7.4 | 8.1 | 19.2 | 10 | 7.4 | 8.1 | 20.1 | 10 | 7.4 | 7.4 | 19.0 |
| 500-A | 10 | 7.4 | 9.1 | 19.8 | 10 | 7.2 | 8.3 | 19.7 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.4 | 8.0 | 20.3 | 10 | 7.3 | 7.2 | 19.1 |
| 500-B | 10 | 7.4 | 9.1 | 19.8 | 10 | 7.2 | 8.2 | 19.6 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.3 | 8.0 | 20.1 | 10 | 7.4 | 7.2 | 19.1 |
| 750-A | 10 | 7.4 | 9.1 | 19.9 | 10 | 7.2 | 8.0 | 19.5 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.3 | 8.1 | 20.3 | 10 | 7.3 | 6.5 | 19.1 |
| 750-B | 10 | 7.4 | 9.1 | 20.0 | 10 | 7.2 | 8.0 | 19.4 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.3 | 8.2 | 20.5 | 10 | 7.3 | 6.5 | 19.1 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 27, 40; 750 mg/L = 34, 85
Final Alkalinity, Hardness (mg/L): Control = 33, 44; 750 mg/L = 33, 49

Test Supervisor:
Verification:

**Western assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC TE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12551
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/14/94 to 4/18/94
CLIENT ID#: GR-SB-16-3

| | 4/14/94 INITIAL | | | | 4/15/94 24-HOUR | | | | 4/16/94 48-HOUR | | | | 4/17/94 72-HOUR | | | | 4/18/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 6.7 | 9.1 | 19.4 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.6 | 7.6 | 19.4 | 10 | 7.2 | 8.9 | 19.0 |
| Control-B | 10 | 6.8 | 9.1 | 19.4 | 10 | 7.4 | 8.2 | 19.1 | 10 | 7.6 | 8.2 | 19.3 | 10 | 7.7 | 7.7 | 19.2 | 10 | 7.4 | 8.7 | 19.0 |
| 250-A | 10 | 7.4 | 9.1 | 20.1 | 10 | 7.2 | 8.3 | 19.7 | 10 | 7.4 | 8.4 | 19.3 | 10 | 7.7 | 7.4 | 19.1 | 10 | 7.3 | 6.7 | 19.2 |
| 250-B | 10 | 7.4 | 9.1 | 20.1 | 10 | 7.2 | 8.8 | 20.0 | 10 | 7.3 | 8.6 | 19.3 | 10 | 7.7 | 7.3 | 19.1 | 10 | 7.3 | 6.7 | 19.1 |
| 500-A | 10 | 7.4 | 9.1 | 20.0 | 10 | 7.2 | 8.8 | 19.8 | 10 | 7.5 | 8.6 | 19.3 | 10 | 7.7 | 7.1 | 19.0 | 10 | 7.3 | 6.6 | 19.2 |
| 500-B | 10 | 7.4 | 9.1 | 19.9 | 10 | 7.2 | 8.7 | 19.9 | 10 | 7.5 | 8.4 | 19.3 | 10 | 7.7 | 7.3 | 19.0 | 10 | 7.3 | 6.6 | 19.1 |
| 750-A | 10 | 7.4 | 9.1 | 19.8 | 10 | 7.2 | 8.7 | 19.4 | 10 | 7.4 | 8.3 | 19.3 | 10 | 7.7 | 7.3 | 19.4 | 10 | 7.4 | 6.4 | 19.1 |
| 750-B | 10 | 7.4 | 9.1 | 19.8 | 10 | 7.2 | 8.6 | 19.4 | 10 | 7.3 | 9.2 | 19.3 | 10 | 7.6 | 7.2 | 19.2 | 10 | 7.4 | 6.4 | 19.1 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 27, 40; 750 mg/L = 39, 68
Final Alkalinity, Hardness (mg/L): Control = 33, 44; 750 mg/L = 36, 45

Test Supervisor:
Verification:

WBL

Wester[illegible] [illegible]oassay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

### STATIC [illegible]JTE BIOASSAY
### Hazardous Waste Test
Fathead Minnow

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| CLIENT: | Clayton Environmental Consultants | ATTENTION: | Suzanne Silvera |  |  |
| SAMPLE ID#: | 12550 | SAMPLE DESCRIPTION: soil | TESTING DATES: | 4/14/94 | to 4/18/94 |
| CLIENT ID#: | GR-SB-14-3 |  |  |  |  |

| TEST CONCENTRATION mg/L | 4/14/94 INITIAL |  |  |  | 4/15/94 24-HOUR |  |  |  | 4/16/94 48-HOUR |  |  |  | 4/17/94 72-HOUR |  |  |  | 4/18/94 96-HOUR,FINAL |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 6.7 | 9.1 | 19.4 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.6 | 7.6 | 19.4 | 10 | 7.2 | 8.9 | 19.0 |
| Control-B | 10 | 6.8 | 9.1 | 19.4 | 10 | 7.4 | 8.2 | 19.1 | 10 | 7.6 | 8.2 | 19.3 | 10 | 7.7 | 7.7 | 19.2 | 10 | 7.4 | 8.7 | 19.0 |
| 250-A | 10 | 7.4 | 9.1 | 19.6 | 10 | 7.2 | 8.4 | 19.3 | 10 | 7.4 | 8.4 | 19.3 | 10 | 7.2 | 7.6 | 19.0 | 10 | 7.5 | 6.9 | 19.1 |
| 250-B | 10 | 7.4 | 9.1 | 19.6 | 10 | 7.2 | 8.8 | 19.1 | 10 | 7.3 | 8.4 | 19.3 | 10 | 7.3 | 7.5 | 19.1 | 10 | 7.5 | 6.5 | 19.1 |
| 500-A | 10 | 7.4 | 9.1 | 19.7 | 10 | 7.3 | 8.8 | 19.3 | 10 | 7.4 | 8.8 | 19.3 | 10 | 7.4 | 7.4 | 19.4 | 10 | 7.5 | 7.0 | 19.2 |
| 500-B | 10 | 7.4 | 9.1 | 19.8 | 10 | 7.4 | 8.8 | 19.4 | 10 | 7.4 | 8.8 | 19.3 | 10 | 7.4 | 7.8 | 19.5 | 10 | 7.5 | 7.2 | 19.1 |
| 750-A | 10 | 7.4 | 9.1 | 19.9 | 10 | 7.3 | 8.8 | 19.9 | 10 | 7.5 | 8.8 | 19.3 | 10 | 7.2 | 7.6 | 20.1 | 10 | 7.5 | 7.0 | 19.2 |
| 750-B | 10 | 7.3 | 9.1 | 19.9 | 10 | 7.3 | 8.8 | 19.9 | 10 | 7.3 | 9.0 | 19.3 | 10 | 7.2 | 7.3 | 20.1 | 10 | 7.5 | 7.1 | 19.1 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 27, 40; 750 mg/L = 35, 60

Final Alkalinity, Hardness (mg/L): Control = 33, 44; 750 mg/L = 42, 45

Test Supervisor:

Verification:

··WASTE

WBL

**Wester [illegible]assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC [illegible]UTE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera

SAMPLE ID#: 12549 SAMPLE DESCRIPTION: soil TESTING DATES: 4/14/94 to 4/18/94

CLIENT ID#: GR-SB-13-1

| | 4/14/94 INITIAL | | | | 4/15/94 24-HOUR | | | | 4/16/94 48-HOUR | | | | 4/17/94 72-HOUR | | | | 4/18/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 6.7 | 9.1 | 19.4 | 10 | 7.4 | 8.0 | 19.3 | 10 | 7.5 | 8.3 | 19.3 | 10 | 7.6 | 7.6 | 19.4 | 10 | 7.2 | 8.9 | 19.0 |
| Control-B | 10 | 6.8 | 9.1 | 19.4 | 10 | 7.4 | 8.2 | 19.1 | 10 | 7.6 | 8.2 | 19.3 | 10 | 7.7 | 7.7 | 19.2 | 10 | 7.4 | 8.7 | 19.0 |
| 250-A | 10 | 7.2 | 9.1 | 19.3 | 10 | 7.4 | 8.8 | 19.2 | 10 | 7.4 | 8.4 | 19.3 | 10 | 7.4 | 7.4 | 19.6 | 10 | 7.3 | 7.0 | 19.0 |
| 250-B | 10 | 7.2 | 9.1 | 19.3 | 10 | 7.4 | 8.8 | 19.6 | 10 | 7.3 | 8.2 | 19.3 | 10 | 7.3 | 7.0 | 19.2 | 10 | 7.4 | 6.2 | 19.0 |
| 500-A | 10 | 7.3 | 9.1 | 19.3 | 10 | 7.3 | 8.6 | 19.7 | 10 | 7.3 | 8.2 | 19.3 | 10 | 7.3 | 7.2 | 19.1 | 10 | 7.4 | 6.8 | 19.1 |
| 500-B | 10 | 7.3 | 9.1 | 19.4 | 10 | 7.4 | 8.6 | 19.1 | 10 | 7.3 | 8.6 | 19.4 | 10 | 7.3 | 7.5 | 19.1 | 10 | 7.5 | 6.7 | 19.1 |
| 750-A | 10 | 7.4 | 9.1 | 19.4 | 10 | 7.3 | 8.6 | 19.0 | 10 | 7.3 | 8.6 | 19.3 | 10 | 7.4 | 7.7 | 18.9 | 10 | 7.4 | 6.8 | 19.1 |
| 750-B | 10 | 7.4 | 9.1 | 19.5 | 10 | 7.3 | 8.3 | 19.0 | 10 | 7.3 | 8.3 | 19.3 | 10 | 7.4 | 8.1 | 19.2 | 10 | 7.5 | 6.9 | 19.1 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 27, 40; 750 mg/L = 33, 58

Final Alkalinity, Hardness (mg/L): Control = 33, 44; 750 mg/L = 43, 53

Test Supervisor: Verification:

WBL

HAZWASTE

Sample #12560:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

The transcribed data sheets and chain-of-custody for these tests are enclosed. If you have any questions concerning this report please contact Linda Mortensen, Hazardous Waste and Acute Effluent Testing Specialist, at the lab (510) 686-3215.

Sample #12554:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12555-58:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12555:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

Sample #12556:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

Sample #12557:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

Sample #12558:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12559-60:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12559:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

SUMMARY:

Sample #12549-54:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12549:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12550:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12551:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12552:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12553:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

WESTERN BIOASSAY LABORATORIES

**Date:** April 22, 1994

**To:**
Ms. Suzanne Silvera
Clayton Environmental Consultants
1252 Quary Lane
Pleasanton, CA 94566

**From:**
Linda S. Mortensen
Hazardous Waste and Acute Effluent
Testing Specialist

Julianne C. Fegley
Laboratory Coordinator

**Subject:** Aquatic Toxicity Testing Results for Hazardous Waste Testing
P.O.#48508

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**SAMPLE MATRIX AND I.D.:** Twelve solid samples #12549 (GR-SB-13-1), #12550 (GR-SB-14-3), #12551 (GR-SB-16-3), #12552 (GR-SB-17-1), #12553 (GR-SB-18-2), #12554 (GR-SB-19-2), #12555 (GR-SB-20-2), #12556 (GR-SB-21-3), #12557 (GR-SB-22-2), #12558 (GR-SB-23-1), #12559 (GR-SB-24-1) and #12560 (GR-SB-15-3).

**TREATMENT DILUTIONS (mg/L):** 250, 500, 750 and Control run in soft carbon filtered tap water mixed with deionized water of 40-48 mg/L hardness and in duplicate with 10 fish/6 L tank and 20 fish/treatment.

**TESTING PERIOD:** Received 4/8/94; Tested 4/14/94 - 4/18/94 and 4/15/94 - 4/19/94.
Tested 4/18/94 - 4/22/94

**BIOASSAY TEST(S):** Fathead minnow (*Pimephales promelas*) 96-hour static Hazardous Waste Toxicity.

**METHODS:** WBL's hazardous waste aquatic toxicity test protocol based on "Standard Methods for the Examination of Water and Wastewater", 18th Edition, American Public Health Association, 1992; California's Title 22 Code, Section #66261.24(a)(6); "Static Acute Bioassay Procedures for Hazardous Waste Samples" (Polisini and Miller, 1988), California Department of Fish and Game; and as certified by the State of California's Department of Toxic Substance Control (CA. EPA).

T-22.SCN

2455 Estand Way • Pleasant Hill, CA 94523
Phone: (510) 686-3215 FAX: (510) 686-0399

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-3-3015-107
Clayton Project No. 94040.73

Sample Identification: METHOD BLANK
Lab Number: 9404073-16
Sample Matrix/Media: SOIL

Date Sampled: --
Date Received: --

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | <0.1 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | <0.1 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

<: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-3-3015-107
Clayton Project No. 94040.73

Sample Identification: GR-SB-18-2
Lab Number: 9404073-14
Sample Matrix/Media: SOIL

Date Sampled: 04/06/94
Date Received: 04/07/94

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4.2 |
| STLC Copper | 1.5 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 2.9 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-3-3015-107
Clayton Project No. 94040.73

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-17-1 | Date Sampled: | 04/06/94 |
| Lab Number: | 9404073-10 | Date Received: | 04/07/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.7 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 2.6 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-3-3015-107
Clayton Project No. 94040.73

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-16-3 | Date Sampled: | 04/06/94 |
| Lab Number: | 9404073-09 | Date Received: | 04/07/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 1.5 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 5.6 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
• Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-3-3015-107
Clayton Project No. 94040.73

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-14-3 | Date Sampled: | 04/06/94 |
| Lab Number: | 9404073-06 | Date Received: | 04/07/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 7.8 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 9.8 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-3-3015-107
Clayton Project No. 94040.73

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-13-1 | Date Sampled: | 04/06/94 |
| Lab Number: | 9404073-01 | Date Received: | 04/07/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 25 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| STLC Lead | 10 | 0.1 | mg/L | 04/11/94 | 04/15/94 | CAM WET | EPA 6010 |
| TCLP Copper | 0.5 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

[illegible]: Not detected at or above limit of detection
--: Information not available or not applicable

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

April 25, 1994

Ms. Charlene Renati
Environmental Compliance Department
SANTA CLARA VALLEY WATER DISTRICT
5750 Almaden Expressway
San Jose, CA 95118

Client Ref.: 94-3-3015-107
Clayton Project No.: 94040.73

Dear Ms. Renati:

Enclosed are our analytical laboratory report and quality assurance data package for the samples received on April 7, 1994. Acute Aquatic Toxicity analysis was performed by Western Bioassay. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of after June 24, 1994, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley

Harriotte A. Hurley, CIH
Director, Laboratory Services
Western Operations

HAH/tjb

Attachments

Clayton
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page 6 of 6
Project No.
Batch No. 9404057
Ind. Code
W.P.
Date Logged In 4/6/94
By

REPORT RESULTS TO
Name SCVWD
Title
Company CH2M HILL
Dept.
Mailing Address
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No. SCVWD
Client Job No.

SEND INVOICE TO
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added.

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Pb,Cu | ACUTE TOXICITY | REACT. CN | REACT. SULFIDE | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 JR | | | | | | | | | | | | | | | |
| GR-SB-12-1 | 4/5/94 | SOIL | 250ml | 1 | X | | | | | | | | | | 16A |
| GR-SB-12-1 | | | 250ml | 1 | | | X | X | | | HOLD FOR ADDITIONAL ANALYSES → | | | X | B |
| GR-SB-12-1 | | | 60ml | 1 | | X | | | | | | | | | C |
| GR-SB-12-1 | | | BAG | 1 | | | | | | | | | | X | D |
| | | | | | | | | | | | | | | | |
| GR-SB-12-2 | | | 250ml | 1 | | | | | | | | | | X | 17A |
| | | | | | | | | | | | | | | | |
| GR-SB-12-3 | | | 250ml | 1 | | | | | | | | | | X | 18A |
| | | | | | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/6/94 10.45
Received by: Jim Mitchell Date/Time 4-6-94 @ 10:45 AM
Relinquished by: Jim Mitchell Date/Time 4-6-94 @ 11:55 AM
Received at Lab by: Date/Time 4/6/94 @ 1153
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only — Page 5 of 6
Project No.
Batch No. 9404057
Ind. Code — W.P.
Date Logged In 4/6/94 — By

**REPORT RESULTS TO**
Name SCVWD — Title
Company CH2M HILL — Dept.
Mailing Address
City, State, Zip
Telephone No. — Telefax No.

Purchase Order No. SCVWD — Client Job No.

**SEND INVOICE TO**
Name
Company — Dept.
Address
City, State, Zip

Date Results Req.:
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | ~~AIR VOLUME (specify units)~~ | Number of Containers | STLC Pb Cu | TCLP Cu Pb | ACUTE AQ TOX | REACT. CN | REACT. SULFIDE | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-11-1 | 4-5-94 | SOIL | 250 ml | 1 | | | | | | | | | | X | 13A |
| GR-SB-11-2 | ↓ | ↓ | 250 ml | 1 | | | | | | | | | | X | 14A |
| GR-SB-11-3 | ↓ | ↓ | 250 ml | 2 | X | X | | | | | | | | | 15 A,B (DUP) |
| GR-SB-11-3 | ↓ | ↓ | 250 ml | 1 | | | | X | X | HOLD FOR ADDITIONAL ANALYSES → | | | | X | C |
| GR-SB-11-3 | ↓ | ↓ | 60 ml | 1 | | | X | | | | | | | | D |
| GR-SB-11-3 | ↓ | ↓ | BAG | 1 | | | | | | | | | | X | E |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print) — Collector's Signature: John Ryan
Relinquished by: John Ryan — Date/Time 4/6/94 10:45 — Received by: Jim Mitchell — Date/Time 4-6-94 @ 10:45 Am
Relinquished by: Jim Mitchell — Date/Time 4-6-94 @ 11:55 Am — Received at Lab by: — Date/Time 4/6/94 1153
Method of Shipment: — Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ____________ Date ________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, 8375
(313) 1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleasant CA 94566
(510) 42 7

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client

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**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| For Clayton Use Only | Page 4 of 6 |
|---|---|
| Project No. | |
| Batch No. 9404057 | |
| Ind. Code | W.P. [illegible] |
| Date Logged In 4/6/94 | By [illegible] |

**REPORT RESULTS TO**
Name SCVWD    Title
Company CH2M HILL    Dept.
Mailing Address
City, State, Zip
Telephone No.    Telefax No.

Purchase Order No. SCVWD    Client Job No.

**SEND INVOICE TO**
Name
Company    Dept.
Address
City, State, Zip

Date Results Req.:
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME~~ (specify units) | Number of Containers | STLC Cu, Pb | ACUTE AQU. TOXIC | REACT. CN | REACT. SULFIDE | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-10-1 | 4-5-94 | SOIL | 250 ml | 1 | X | | | | | | | | | | 10 A |
| GR-SB-10-1 | | | 250 ml | 1 | | | X | X | | | HOLD FOR ADDITIONAL ANALYSES → | | | X | B |
| GR-SB-10-1 | | | 60 ml | 1 | | X | | | | | | | | | C |
| GR-SB-10-1 | | | BAG | 1 | | | | | | | | | | X | D |
| | | | | | | | | | | | | | | | |
| GR-SB-10-2 | | | 250 ml | 1 | | | | | | | | | | X | 11 A |
| | | | | | | | | | | | | | | | |
| GR-SB-10-3 | | | 250 ml | 1 | | | | | | | | | | X | 12A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**

Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan    Date/Time 1045 4/6/94
Received by: [illegible] Mitchell    Date/Time 4-6-94 @ 10:45 Am
Relinquished by: [illegible] Mitchell    Date/Time 4-6-94 @ 11:55 Am
Received at Lab by:    Date/Time 4/6/94 11:55
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ____________________ Date __________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

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Clayton
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page 3 of 6
Project No.
Batch No. 9404057
Ind. Code
W.P. 8
Date Logged In 4/6/94
By [illegible]

REPORT RESULTS TO
Name SCVWD
Title
Company CH2M HILL
Dept.
Mailing Address
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No. SCVWD
Client Job No.

SEND INVOICE TO
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.:
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request. Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Cu, Pb | TCLP Cu, Pb | ACUTE TOXICITY ([illegible]) | REACTIVITY (CYANIDE) | REACTIVITY (SULFIDE) | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-9-1 | 4-5-94 | SOIL | 250ml | 2 | X | X | | | | | | | | | 07A,B (DUP) |
| GR-SB-9-1 | | | 250ml | 1 | | | | X | X | | HOLD FOR FUTURE ANALYSES | | → | X | C |
| GR-SB-9-1 | | | 60ml | 1 | | | X | | | | | | | | D |
| GR-SB-9-1 | | | BAG | 1 | | | | | | | | | | X | E |
| | | | | | | | | | | | | | | | |
| GR-SB-9-2 | | | 250ml | 1 | | | | | | | | | | X | 08A |
| | | | | | | | | | | | | | | | |
| GR-SB-9-2 | | | 250ml | 1 | | | | | | | | | | X | 09A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/6/94 10:45
Received by: [illegible] Mitchell Date/Time 4-6-94 @ 10:45 A
Relinquished by: [illegible] Mitchell Date/Time 4-6-94 @ 11:55 Am
Received at Lab by: [illegible] Date/Time 4/6/94 11:55
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
No[illegible] MI 48375
(3[illegible] 44-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) [illegible] 2657

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DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Cli[illegible] Retains

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page 2 of 6 |
| Project No. | |
| Batch No. | 9404057 |
| Ind. Code | W.P. |
| Date Logged In 4/6/94 | By [illegible] |

**REPORT RESULTS TO**
Name SCVWD Title
Company CH2M HILL Dept.
Mailing Address
City, State, Zip
Telephone No. Telefax No.

Purchase Order No. Client Job No.

**SEND INVOICE TO**
Name
Company Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME~~ (specify units) | Number of Containers | STLC Cu, Pb | ACUTE AQU. TOX | REACTIVITY CYANIDE | REACT. SULFIDE | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-8-1 | 4/5/94 | SOIL | 250 ml | 1 | X | | | | | HOLD | | | | | 04 A, |
| GR-SB-8-1 | | | 250 ml | 1 | | | X | X | | FOR FUTURE ANALYSES → | | | | X | B |
| GR-SB-8-1 | | | 60 ml | 1 | | X | | | | | | | | | C |
| GR-SB-8-1 | | | BAG | 1 | | | | | | | | | | X | D |
| | | | | | | | | | | | | | | | |
| GR-SB-8-2 | | | 250 ml | 1 | | | | | | | | | | X | 05 A |
| GR-SB-8-3 | | | 250 ml | 1 | | | | | | | | | | X | 06 A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/6/94 10:45
Received by: [illegible] Mitchell Date/Time @ 4-6-94 10:45 AM
Relinquished by: [illegible] Mitchell Date/Time @ 4-6-94 11:55 AM
Received at Lab by: [illegible] Date/Time 4/6/94 1155
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

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**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page 1 of 6
Project No.
Batch No. 9404057
Ind. Code
W.P.
Date Logged In 4/6/94 By

REPORT RESULTS TO
Name SCVWD
Title
Company CH2M HILL
Dept.
Mailing Address GUADALUPE RIVER
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No. SCVWD
Client Job No.

SEND INVOICE TO
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)
MEET ALL REQ. FOR RCRA
* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME~~ (specify units) | Number of Containers | STLC Cu Pb | TCLP Cu Pb | ACUTE AQUATIC TOXICITY | REACTIVITY CYANIDE, SULFIDE | | | | | | HOLD | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-7-1 | 4/5/94 | SOIL | 250 ml | 1 | | | | | | | | | | X | 01A |
| | | | | | | | | | | | | | | | |
| GR-SB-7-2 | | | 250 ml | 2 | X | X | | | | | | | | | 02 A, B-DUP |
| GR-SB-7-2 | | | 250 ml | 1 | | | | X | | | FOR ADDITIONAL ANALYSIS | | | X | C |
| GR-SB-7-2 | | | 60 ml | 1 | | | X | | | | | | | | D |
| GR-SB-7-2 | | | P BAG 5# | 1 | | | | | | | | | | X | E |
| | | | | | | | | | | | | | | DA | |
| GR-SB-7-3 | | | 250 ml | 1 | | | | | | | | | | X | 03A |
| | | | | | | | | | | | | | | | |
| GR-SB-3-2 | 4/4/94 | SOIL | 250 ml | NOT SHIPPED W/ COC p3 ON 4/4/94 SAMPLES (ADD TO: 9404056 SEE p) 3) | | | | | | | | | | | |

CHAIN OF CUSTODY
Collected by: JOHN RYAN / CH2M HILL (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/6/94 10:45
Received by: Jim Mitchell Date/Time 4-6-94 @ 10:45 Am
Relinquished by: Jim Mitchell Date/Time 4-6-94 @ 11:55 Am
Received at Lab by: Date/Time 4/6/94 1155
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: Date
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi 48375
(313, .-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasan CA 94566
(510) 4 .57

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Clie tains

2/92

# Quality Assurance Results Summary
for
Clayton Project No. 94040.57

| | |
|---|---|
| Clayton Lab Number: | 9404137-18A |
| Ext./Prep. Method: | EPA9010 |
| Date: | 04/14/94 |
| Analyst: | TK |
| Std. Source: | MALL 6881 |
| Sample Matrix/Media: | SOIL |

| | |
|---|---|
| Analytical Method: | EPA9010 |
| Instrument ID: | 07487 |
| Date: | 04/14/94 |
| Time: | 09:00 |
| Analyst: | MCN |
| Units: | mg/kg |

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CYANIDE | ND | 10.0 | 8.71 | 87 | 9.25 | 92 | 90 | 58 | 135 | 5.9 | 25 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.57

Clayton Lab Number: 9404073-01A
Ext./Prep. Method: EPA3010
Date: 04/14/94
Analyst: RAH
Std. Source: A931201
Sample Matrix/Media: TCLP

Analytical Method: EPA6010
Instrument ID: 03891
Date: 04/15/94
Time: 12:00
Analyst: RAH
Units: MG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER | 0.490 | 10.0 | 10.4 | 99 | 10.3 | 98 | 99 | 75 | 125 | 1.0 | 20 |
| LEAD | ND | 5.00 | 4.53 | 91 | 4.51 | 90 | 90 | 75 | 125 | 0.4 | 20 |

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LCS = Laboratory Control Sample
Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 94040.57

Clayton Lab Number: 9404056-01A
Ext./Prep. Method: EPA 3010
Date: 04/12/94
Analyst: RAH
Std. Source: VHG 301959R2
Sample Matrix/Media: STLC

Analytical Method: EPA6010
Instrument ID: 03891
Date: 04/12/94
Time: 11:04
Analyst: DS
Units: MG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | ND | 10.0 | 8.87 | 89 | 9.03 | 90 | 90 | 75 | 125 | 1.8 | 20 |
| BARIUM | 5.30 | 10.0 | 14.2 | 89 | 14.3 | 90 | 90 | 75 | 125 | 0.7 | 20 |
| BERYLLIUM | ND | 10.0 | 8.78 | 88 | 8.90 | 89 | 88 | 75 | 125 | 1.4 | 20 |
| CADMIUM | ND | 10.0 | 8.88 | 89 | 8.99 | 90 | 89 | 75 | 125 | 1.2 | 20 |
| CHROMIUM | 0.450 | 10.0 | 9.35 | 89 | 9.46 | 90 | 90 | 75 | 125 | 1.2 | 20 |
| COBALT | 0.370 | 10.0 | 9.36 | 90 | 9.48 | 91 | 91 | 75 | 125 | 1.3 | 20 |
| COPPER | 0.640 | 10.0 | 9.55 | 89 | 9.66 | 90 | 90 | 75 | 125 | 1.1 | 20 |
| LEAD | 1.49 | 10.0 | 10.2 | 87 | 10.5 | 90 | 89 | 75 | 125 | 2.9 | 20 |
| MOLYBDENUM | ND | 10.0 | 9.12 | 91 | 9.26 | 93 | 92 | 75 | 125 | 1.5 | 20 |
| NICKEL | 0.940 | 10.0 | 9.86 | 89 | 9.99 | 90 | 90 | 75 | 125 | 1.3 | 20 |
| SILVER | ND | 10.0 | 8.78 | 88 | 8.89 | 89 | 88 | 75 | 125 | 1.2 | 20 |
| THALLIUM | ND | 10.0 | 8.81 | 88 | 8.94 | 89 | 89 | 75 | 125 | 1.5 | 20 |
| VANADIUM | 0.310 | 10.0 | 9.24 | 89 | 9.36 | 91 | 90 | 75 | 125 | 1.3 | 20 |
| ZINC | 2.02 | 10.0 | 11.0 | 89 | 11.1 | 91 | 90 | 75 | 125 | 1.4 | 20 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.57

Clayton Lab Number: 9404057-02C
Ext./Prep. Method: EPA7.3.4.2
Date: 04/18/94
Analyst: HYW
Std. Source: BAKER #61170
Sample Matrix/Media: SOIL

Analytical Method: EPA7_3_4_2
Instrument ID: 00008
Date: 04/19/94
Time: 11:00
Analyst: HYW
Units: mg/Kg

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| REACTIVE SULFIDE | ND | 272 | 270 | 99 | 260 | 96 | 97 | 75 | 125 | 3.8 | 25 |

LCS = Laboratory Control Sample
Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Clayton
ENVIRONMENTAL
CONSULTANTS

# Quality Assurance Results Summary

# Matrix Spike/Matrix Spike Duplicate Results

# for

# Clayton Project No. 94040.57

# WESTERN BIOASSAY LABORATORY
# FISH BIOASSAY MEASUREMENTS

## Fathead Minnow

For: Clayton Environmental Consultants

Sample ID#: 12536-47

Stock Date: 4/8/94

Client ID#: GR-SB- 1-1, 2-1, 3-2, 4-1, 5-2, 6-2, 7-2, 8-1, 9-1, 10-1, 11-3 12-1

| | | | | | |
|---|---|---|---|---|---|
| Average Length: | 31.8 | mm SL | Average Weight: | 0.45 | g |
| Standard D. (S): | 1.13 | mm SL | Standard D. (S): | 0.059 | g |
| Maximum Length: | 34.0 | mm SL | Maximum Weight: | 0.58 | g |
| Minimum Length: | 31.0 | mm SL | Minimum Weight: | 0.38 | g |

| | Fish Length (mm SL) | | Fish Weight (g) |
|---|---|---|---|
| 1. | 32.0 | 1. | 0.49 |
| 2. | 31.0 | 2. | 0.38 |
| 3. | 33.0 | 3. | 0.48 |
| 4. | 34.0 | 4. | 0.58 |
| 5. | 31.0 | 5. | 0.40 |
| 6. | 31.0 | 6. | 0.42 |
| 7. | 31.0 | 7. | 0.41 |
| 8. | 31.0 | 8. | 0.41 |
| 9. | 33.0 | 9. | 0.46 |
| 10. | 31.0 | 10. | 0.45 |

Remarks:

Measured: 4/14/94

**Wester )assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC 'TE BIOASSAY
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera
SAMPLE ID#: 12547 SAMPLE DESCRIPTION: soil TESTING DATES: 4/11/94 to 4/15/94
CLIENT ID#: GR-SB-12-1

| | 4/11/94 INITIAL | | | | 4/12/94 24-HOUR | | | | 4/13/94 48-HOUR | | | | 4/14/94 72-HOUR | | | | 4/15/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.5 | 20.3 | 10 | 6.8 | 5.5 | 20.2 | 10 | 7.2 | 7.2 | 20.6 | 10 | 7.2 | 7.3 | 20.4 |
| Control-B | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.6 | 20.4 | 10 | 6.9 | 7.7 | 20.3 | 10 | 7.2 | 7.6 | 20.6 | 10 | 7.2 | 7.4 | 20.3 |
| 250-A | 10 | 7.5 | 9.1 | 19.1 | 10 | 7.5 | 8.4 | 20.7 | 10 | 7.4 | 8.8 | 20.9 | 10 | 7.0 | 6.7 | 20.9 | 10 | 7.0 | 7.0 | 20.5 |
| 250-B | 10 | 7.5 | 9.1 | 19.2 | 10 | 7.6 | 8.4 | 20.7 | 10 | 7.4 | 8.7 | 21.1 | 10 | 7.0 | 6.9 | 20.9 | 10 | 7.1 | 7.2 | 20.5 |
| 500-A | 10 | 7.5 | 9.1 | 19.9 | 10 | 7.4 | 8.4 | 20.7 | 10 | 7.3 | 6.7 | 20.7 | 10 | 7.0 | 8.0 | 20.9 | 10 | 7.2 | 7.9 | 20.6 |
| 500-B | 10 | 7.6 | 9.1 | 20.4 | 10 | 7.3 | 8.5 | 20.6 | 10 | 7.2 | 6.6 | 20.8 | 10 | 7.0 | 7.5 | 20.9 | 10 | 7.2 | 7.5 | 20.7 |
| 750-A | 10 | 7.6 | 9.1 | 20.0 | 10 | 7.3 | 8.5 | 20.8 | 10 | 7.2 | 6.7 | 20.8 | 10 | 7.0 | 7.5 | 20.9 | 10 | 7.2 | 7.6 | 20.7 |
| 750-B | 10 | 7.6 | 9.1 | 19.8 | 10 | 7.3 | 8.4 | 20.7 | 10 | 7.2 | 7.0 | 20.8 | 10 | 7.0 | 7.6 | 20.9 | 10 | 7.2 | 7.8 | 20.2 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 31, 59; 750 mg/L = 30, 52
Final Alkalinity, Hardness (mg/L): Control = 39, 44; 750 mg/L = 34, 56

Test Supervisor:
Verification:

HAZWASTE

WBL

Wester[illegible]assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC [illegible]TE BIOASSAY
### Hazardous Waste Test
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera
SAMPLE ID#: 12546 SAMPLE DESCRIPTION: soil TESTING DATES: 4/11/94 to 4/15/94
CLIENT ID#: GR-SB-11-3

| | 4/11/94 INITIAL | | | | 4/12/94 24-HOUR | | | | 4/13/94 48-HOUR | | | | 4/14/94 72-HOUR | | | | 4/15/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.5 | 20.3 | 10 | 6.8 | 5.5 | 20.2 | 10 | 7.2 | 7.2 | 20.6 | 10 | 7.2 | 7.3 | 20.4 |
| Control-B | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.6 | 20.4 | 10 | 6.9 | 7.7 | 20.3 | 10 | 7.2 | 7.6 | 20.6 | 10 | 7.2 | 7.4 | 20.3 |
| 250-A | 10 | 7.5 | 9.1 | 19.0 | 10 | 7.0 | 8.5 | 20.4 | 10 | 7.1 | 7.4 | 20.6 | 10 | 7.0 | 7.9 | 20.7 | 10 | 7.3 | 7.2 | 20.4 |
| 250-B | 10 | 7.6 | 9.1 | 19.2 | 10 | 7.4 | 8.4 | 20.5 | 10 | 7.2 | 7.2 | 20.7 | 10 | 7.1 | 6.8 | 20.7 | 10 | 7.3 | 7.5 | 20.4 |
| 500-A | 10 | 7.6 | 9.1 | 19.2 | 10 | 7.3 | 8.4 | 20.6 | 10 | 7.2 | 7.3 | 20.8 | 10 | 7.1 | 7.5 | 20.8 | 10 | 7.4 | 7.4 | 20.5 |
| 500-B | 10 | 7.5 | 9.1 | 19.2 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.2 | 7.7 | 20.8 | 10 | 7.0 | 7.8 | 20.8 | 10 | 7.3 | 7.4 | 20.5 |
| 750-A | 10 | 7.5 | 9.1 | 19.2 | 10 | 7.2 | 8.5 | 20.7 | 10 | 7.2 | 7.2 | 20.9 | 10 | 7.0 | 7.5 | 20.8 | 10 | 7.5 | 7.5 | 20.3 |
| 750-B | 10 | 7.5 | 9.1 | 19.2 | 10 | 7.3 | 8.4 | 20.6 | 10 | 7.2 | 7.2 | 20.8 | 10 | 7.0 | 7.1 | 20.8 | 10 | 7.4 | 7.2 | 20.5 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 31, 59; 750 mg/L = 34, 52
Final Alkalinity, Hardness (mg/L): Control = 39, 44; 750 mg/L = 37, 42

Test Supervisor: Verification:

VASTE

WBL

**Wester assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC TE BIOASSAY
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera
SAMPLE ID#: 12545 SAMPLE DESCRIPTION: soil TESTING DATES: 4/11/94 to 4/15/94
CLIENT ID#: GR-SB-10-1

| | 4/11/94 INITIAL | | | | 4/12/94 24-HOUR | | | | 4/13/94 48-HOUR | | | | 4/14/94 72-HOUR | | | | 4/15/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.5 | 20.3 | 10 | 6.8 | 5.5 | 20.2 | 10 | 7.2 | 7.2 | 20.6 | 10 | 7.2 | 7.3 | 20.4 |
| Control-B | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.6 | 20.4 | 10 | 6.9 | 7.7 | 20.3 | 10 | 7.2 | 7.6 | 20.6 | 10 | 7.2 | 7.4 | 20.3 |
| 250-A | 10 | 7.5 | 9.1 | 19.4 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.2 | 8.0 | 20.5 | 10 | 7.0 | 7.5 | 20.8 | 10 | 7.2 | 7.7 | 20.4 |
| 250-B | 10 | 7.5 | 9.1 | 19.3 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.2 | 7.8 | 20.5 | 10 | 7.0 | 7.4 | 20.8 | 10 | 7.3 | 7.9 | 20.5 |
| 500-A | 10 | 7.5 | 9.1 | 19.3 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.2 | 7.6 | 20.5 | 10 | 7.0 | 7.4 | 20.8 | 10 | 7.4 | 7.6 | 20.4 |
| 500-B | 10 | 7.5 | 9.1 | 19.2 | 10 | 7.2 | 8.4 | 20.5 | 10 | 7.1 | 7.2 | 20.6 | 10 | 7.0 | 7.6 | 20.8 | 10 | 7.4 | 7.8 | 20.4 |
| 750-A | 10 | 7.6 | 9.1 | 19.2 | 10 | 7.2 | 8.4 | 20.3 | 10 | 7.1 | 6.7 | 20.6 | 10 | 6.9 | 7.0 | 20.6 | 10 | 7.5 | 7.8 | 20.4 |
| 750-B | 10 | 7.6 | 9.1 | 19.2 | 10 | 7.4 | 8.4 | 20.3 | 10 | 7.2 | 8.2 | 20.7 | 10 | 7.0 | 7.0 | 20.7 | 10 | 7.5 | 7.5 | 20.5 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 31, 59; 750 mg/L = 36, 60
Final Alkalinity, Hardness (mg/L): Control = 39, 44; 750 mg/L = 34, 61

Test Supervisor:

Verification:

HAZWASTE

WBL

Wester )assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC JTE BIOASSAY**
Hazardous Waste Test
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera

SAMPLE ID#: 12544 SAMPLE DESCRIPTION: soil TESTING DATES: 4/11/94 to 4/15/94

CLIENT ID#: GR-SB-9-1

| | 4/11/94 INITIAL | | | | 4/12/94 24-HOUR | | | | 4/13/94 48-HOUR | | | | 4/14/94 72-HOUR | | | | 4/15/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.5 | 20.3 | 10 | 6.8 | 5.5 | 20.2 | 10 | 7.2 | 7.2 | 20.6 | 10 | 7.2 | 7.3 | 20.4 |
| Control-B | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.6 | 20.4 | 10 | 6.9 | 7.7 | 20.3 | 10 | 7.2 | 7.6 | 20.6 | 10 | 7.2 | 7.4 | 20.3 |
| 250-A | 10 | 7.3 | 9.1 | 19.0 | 10 | 7.1 | 8.4 | 20.7 | 10 | 6.9 | 7.1 | 20.7 | 10 | 7.0 | 7.2 | 20.8 | 10 | 7.1 | 7.9 | 20.6 |
| 250-B | 10 | 7.3 | 9.1 | 19.1 | 10 | 7.4 | 8.4 | 20.8 | 10 | 7.0 | 7.0 | 20.9 | 10 | 7.0 | 6.9 | 20.9 | 10 | 7.2 | 8.0 | 20.6 |
| 500-A | 10 | 7.4 | 9.1 | 19.2 | 10 | 7.4 | 8.4 | 20.7 | 10 | 7.2 | 8.5 | 20.8 | 10 | 7.1 | 8.3 | 20.6 | 10 | 7.3 | 8.0 | 20.6 |
| 500-B | 10 | 7.4 | 9.1 | 19.4 | 10 | 7.4 | 8.5 | 20.6 | 10 | 7.2 | 8.6 | 20.6 | 10 | 7.1 | 8.1 | 20.5 | 10 | 7.4 | 8.2 | 20.6 |
| 750-A | 10 | 7.5 | 9.1 | 19.4 | 10 | 7.4 | 8.4 | 20.4 | 10 | 7.3 | 8.7 | 20.5 | 10 | 7.2 | 8.0 | 20.6 | 10 | 7.4 | 8.1 | 20.5 |
| 750-B | 10 | 7.5 | 9.1 | 19.4 | 10 | 7.5 | 8.4 | 20.3 | 10 | 7.4 | 8.9 | 20.5 | 10 | 7.3 | 8.0 | 20.7 | 10 | 7.6 | 8.2 | 20.6 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 31, 59; 750 mg/L = 42, 62

Final Alkalinity, Hardness (mg/L): Control = 39, 44; 750 mg/L = 39, 47

Test Supervisor: Verification: Julianne Fegley

WASTE

WBL

**Wester: ıassay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC ITE BIOASSAY
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12543
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/11/94 to 4/15/94
CLIENT ID#: GR-SB-8-1

| | 4/11/94 INITIAL | | | | 4/12/94 24-HOUR | | | | 4/13/94 48-HOUR | | | | 4/14/94 72-HOUR | | | | 4/15/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.5 | 20.3 | 10 | 6.8 | 5.5 | 20.2 | 10 | 7.2 | 7.2 | 20.6 | 10 | 7.2 | 7.3 | 20.4 |
| Control-B | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.6 | 20.4 | 10 | 6.9 | 7.7 | 20.3 | 10 | 7.2 | 7.6 | 20.6 | 10 | 7.2 | 7.4 | 20.3 |
| 250-A | 10 | 7.0 | 9.1 | 19.3 | 10 | 7.1 | 8.4 | 20.4 | 10 | 6.9 | 5.4 | 20.2 | 10 | 7.1 | 7.6 | 20.5 | 10 | 7.2 | 7.4 | 20.3 |
| 250-B | 10 | 7.1 | 9.1 | 19.3 | 10 | 7.1 | 8.5 | 20.4 | 10 | 6.8 | 5.2 | 20.2 | 10 | 7.0 | 7.7 | 20.5 | 10 | 7.2 | 7.2 | 20.4 |
| 500-A | 10 | 7.1 | 9.1 | 19.2 | 10 | 7.1 | 8.4 | 20.4 | 10 | 6.8 | 4.8 | 20.4 | 10 | 7.0 | 7.0 | 20.6 | 10 | 7.2 | 6.9 | 20.4 |
| 500-B | 10 | 7.2 | 9.1 | 19.2 | 10 | 7.1 | 8.4 | 20.5 | 10 | 6.9 | 4.9 | 20.5 | 10 | 7.0 | 6.5 | 20.5 | 10 | 7.2 | 5.8 | 20.4 |
| 750-A | 10 | 7.2 | 9.1 | 19.2 | 10 | 7.1 | 8.5 | 20.5 | 10 | 6.9 | 5.8 | 20.6 | 10 | 7.0 | 6.5 | 20.6 | 10 | 7.3 | 7.1 | 20.4 |
| 750-B | 10 | 7.2 | 9.1 | 19.1 | 10 | 7.2 | 8.5 | 20.5 | 10 | 6.9 | 7.3 | 20.6 | 10 | 7.0 | 6.7 | 20.7 | 10 | 7.3 | 7.2 | 20.4 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 31, 59; 750 mg/L = 38, 50
Final Alkalinity, Hardness (mg/L): Control = 39, 44; 750 mg/L = 36, 48

Test Supervisor:
Verification:

HAZWASTE

WBL

Westerı assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

# STATIC UTE BIOASSAY
## Hazardous Waste Test
## Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12542
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/9/94 to 4/13/94
CLIENT ID#: GR-SB-7-2

| | 4/9/94 | | | | 4/10/94 | | | | 4/11/94 | | | | 4/12/94 | | | | 4/13/94 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INITIAL | | | | 24-HOUR | | | | 48-HOUR | | | | 72-HOUR | | | | 96-HOUR,FINAL | | | |
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 19.7 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.4 | 6.5 | 20.0 |
| Control-B | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 20.1 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.4 | 6.7 | 19.9 |
| 250-A | 10 | 8.0 | 9.1 | 19.3 | 10 | 8.0 | 9.0 | 19.0 | 10 | 7.4 | 8.2 | 20.0 | 10 | 7.2 | 8.1 | 20.2 | 10 | 6.9 | 6.3 | 20.5 |
| 250-B | 10 | 7.9 | 9.1 | 19.3 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.3 | 8.0 | 20.4 | 10 | 7.2 | 8.1 | 20.4 | 10 | 7.0 | 6.1 | 20.5 |
| 500-A | 10 | 7.9 | 9.1 | 19.2 | 10 | 8.0 | 8.9 | 19.1 | 10 | 7.3 | 8.0 | 20.4 | 10 | 7.3 | 8.1 | 20.6 | 10 | 7.0 | 6.0 | 20.4 |
| 500-B | 10 | 7.9 | 9.1 | 19.2 | 10 | 8.0 | 8.9 | 19.1 | 10 | 7.3 | 8.2 | 20.4 | 10 | 7.3 | 8.0 | 20.6 | 10 | 7.0 | 6.0 | 20.4 |
| 750-A | 10 | 7.9 | 9.1 | 19.1 | 10 | 8.0 | 8.9 | 19.1 | 10 | 7.3 | 8.1 | 20.4 | 10 | 7.3 | 8.0 | 20.6 | 10 | 7.0 | 6.3 | 20.3 |
| 750-B | 10 | 7.9 | 9.1 | 19.1 | 10 | 8.0 | 8.9 | 19.3 | 10 | 7.4 | 8.2 | 20.3 | 10 | 7.3 | 8.0 | 20.6 | 10 | 7.0 | 6.6 | 20.2 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 32, 54; 750 mg/L = 38, 62
Final Alkalinity, Hardness (mg/L): Control = 39, 49; 750 mg/L = 36, 52

Test Supervisor:
Verification:

WBL

AZWASTE

Sample #12546:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12547:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

The transcribed data sheets and chain-of-custody for these tests are enclosed. If you have any questions concerning this report please contact Linda Mortensen, Hazardous Waste and Acute Effluent Testing Specialist, at the lab (510) 686-3215.

Sample #12541:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12542:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12543-47:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12543:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12544:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12545:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

**SUMMARY:**

Sample #12536-42:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12536:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12537:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12538:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12539:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12540:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

WESTERN BIOASSAY LABORATORIES

Date: April 19, 1994

To: Ms. Suzanne Silvera
Clayton Environmental Consultants
1252 Quary Lane
Pleasanton, CA 94566

From: Linda S. Mortensen
Hazardous Waste and Acute Effluent
Testing Specialist

Julianne C. Fegley
Laboratory Coordinator

Subject: Aquatic Toxicity Testing Results for Hazardous Waste Testing
P.O.#48508

---

**SAMPLE MATRIX AND I.D.:** Twelve solid samples #12536 (GR-SB-1-1), #12537 (GR-SB-2-1), #12538 (GR-SB-3-2), #12539 (GR-SB-4-1), #12540 (GR-SB-5-2), #12541 (GR-SB-6-2), #12542 (GR-SB-7-2), #12543 (GR-SB-8-1), #12544 (GR-SB-9-1), #12545 (GR-SB-10-1), #12546 (GR-SB-11-3) and #12547 (GR-SB-12-1).

**TREATMENT DILUTIONS (mg/L):** 250, 500, 750 and Control run in soft carbon filtered tap water mixed with deionized water of 40-48 mg/L hardness and in duplicate with 10 fish/6 L tank and 20 fish/treatment.

**TESTING PERIOD:** Received 4/7/94; Tested 4/9/94 - 4/11/94 and 4/11/94 - 4/15/94.

**BIOASSAY TEST(S):** Fathead minnow (*Pimephales promelas*) 96-hour static Hazardous Waste Toxicity.

**METHODS:** WBL's hazardous waste aquatic toxicity test protocol based on "Standard Methods for the Examination of Water and Wastewater", 18th Edition, American Public Health Association, 1992; California's Title 22 Code, Section #66261.24(a)(6); "Static Acute Bioassay Procedures for Hazardous Waste Samples" (Polisini and Miller, 1988), California Department of Fish and Game; and as certified by the State of California's Department of Toxic Substance Control (CA. EPA).

T-22.SCN

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.57

| | | | |
|---|---|---|---|
| Sample Identification: | METHOD BLANK | Date Sampled: | -- |
| Lab Number: | 9404057-19 | Date Received: | -- |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | <0.1 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | <0.1 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.57

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-12-1 | Date Sampled: | 04/05/94 |
| Lab Number: | 9404057-16 | Date Received: | 04/05/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.4 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 0.7 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.57

| | | | |
|---|---|---|---|
| **Sample Identification:** | GR-SB-11-3 | **Date Sampled:** | 04/05/94 |
| **Lab Number:** | 9404057-15 | **Date Received:** | 04/05/94 |
| **Sample Matrix/Media:** | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.3 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 0.3 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

<: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.57

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-10-1 | Date Sampled: | 04/05/94 |
| Lab Number: | 9404057-10 | Date Received: | 04/05/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.2 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 1.8 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
: Information not available or not applicable

**Analytical Results**
**for**
**Santa Clara Valley Water District**
**Client Reference: 94-1-3015-107**
**Clayton Project No. 94040.57**

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-9-1 | Date Sampled: | 04/05/94 |
| Lab Number: | 9404057-07 | Date Received: | 04/05/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.2 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 1.0 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

. Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.57

Sample Identification: GR-SB-8-1
Lab Number: 9404057-04
Sample Matrix/Media: SOIL

Date Sampled: 04/05/94
Date Received: 04/05/94

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.1 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 0.1 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
--: Information not available or not applicable

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only
Page 6 of 6
Project No.
Batch No. 9404056
Ind. Code
W.P.
Date Logged In 4/6/94
By

**REPORT RESULTS TO**
Name SCVWD
Title
Company
Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No.
Client Job No.

**SEND INVOICE TO**
Name SCVWD
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Pb, Cu | TCLP Pb, Cu | ACUTE AQUATIC TOXICITY | REACTIVITY CYANIDE, SULFIDE | | | | | | | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-6-1 | 4/4/94 | SOIL | 250 ml | 1 | | | | | | | | | | | HOLD 16 A |
| | | | | | | | | | | | | | | | |
| GR-SB-6-2 | | | 250 ml | 1 | X | | | | | | | | | | 17 A |
| GR-SB-6-2 | | | 60 ml | 1 | | | X | | | | | | | | B |
| GR-SB-6-2 | | | BAG | 1 | | | | | | | | | | | HOLD ~~18~~ C |
| GR-SB-6-2 | | | 250 ml | 1 | | | | X | | | | | | | D |
| | | | | | | | | | | | | | | | |
| GR-SB-6-3 | ↓ | ↓ | 250 ml | 1 | | | | | | | | | | | HOLD 18 A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN / CH2M (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/5/94 8:45
Received by: Date/Time 4/5/94 8:45
Relinquished by: EXPRESS-IT COURIER Date/Time 4/5/94
Received at Lab by: Date/Time 4/5/94 @ 10
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ____________________ Date ____________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

2/92

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page ___ of 6 |
| Project No. | |
| Batch No. 9404056 | |
| Ind. Code | W.P. |
| Date Logged In 4/6/94 | By |

**REPORT RESULTS TO**
Name SCVWD
Title
Company
Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No. SCVWD
Client Job No.

**SEND INVOICE TO**
Name
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Cu Pb | TCLP Cu Pb | ACUTE AQUATIC TOXICITY | REACTIVITY CYANIDE SULFIDE | | | | | | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-5-1 | 4/4/94 | SOIL | 250 ml | 1 | | | | | | | | | | HOLD 13A |
| | | | | | | | | | | | | | | |
| GR-SB-5-2 | | | 250 ml | 2 | X | X | | | | | | | | 14 A,B |
| GR-SB-5-2 | | | 250 ml | 1 | | | | X | | | | | | C |
| GR-SB-5-2 | | | 60 ml | 1 | | | X | | | | | | | D |
| GR-SB-5-2 | | | 3" SLEEVE 6" | 1 | | | | | | | | | | HOLD E |
| | | | | | | | | | | | | | | |
| GR-SB-5-3 | | | 250 ml | 1 | | | | | | | | | | HOLD 15A |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN/CH2M HILL (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/5/94 8:45
Received by: Date/Time 4/5/94 8:45
Relinquished by: EXPRESS-IT Courier Date/Time
Received at Lab by: Date/Time 4/5/94
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ____________________ Date __________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(3 44-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.57

Sample Identification: GR-SB-7-2
Lab Number: 9404057-02
Sample Matrix/Media: SOIL

Date Sampled: 04/05/94
Date Received: 04/05/94

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 4.5 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 4.4 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

<: Not detected at or above limit of detection
--: Information not available or not applicable

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

April 20, 1994

Ms. Charleen Renati
Environmental Compliance Department
SANTA CLARA VALLEY WATER DISTRICT
5750 Almaden Expressway
San Jose, CA 95118

94-2-3015-107
Client Ref.: ~~94-1-3015-107~~
Clayton Project No.: 94040.57

Dear Ms. Renati:

Enclosed are our analytical laboratory report and quality assurance results summary for the samples received on April 5, 1994. Acute Aquatic Toxicity analysis was performed by Western Bioassay and a copy of their report is enclosed. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of after June 19, 1994, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH
Director, Laboratory Services
Western Operations

HAH/tjb

Attachments

Clayton Environmental Consultants, Inc. • Detroit • New York/Newark • Atlanta • San Francisco • Los Angeles
Honolulu • Windsor, ON • Toronto • Birmingham, U.K. • London, U.K. • Southampton, U.K. • Gateshead, U.K.

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only Page 4 of 6
Project No.
Batch No. 9404056
Ind. Code W.P.
Date Logged In 4/6/94 By

**REPORT RESULTS TO**
Name SCVWD Title CAROL PRESLEY
Company Dept.
Mailing Address CH2M HILL
City, State, Zip
Telephone No. Telefax No.

Purchase Order No. SCVWD Client Job No.

**SEND INVOICE TO**
Name
Company Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Cu,Pb | | ACUTE AQUATIC TOXICITY | REACTIVITY SULFIDE CYANIDE | | | | | | | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-4-1 | 4/4/94 | SOIL | 250 ml | 1 | X | | | | | | | | | | 10A |
| GR-SB-4-1 | | | BAG | 1 | | | | | | | | | | | HOLD B |
| GR-SB-4-1 | | | 250 ml | 1 | | | | X | | | | | | | C |
| GR-SB-4-1 | | | 60 ml | 1 | | | X | | | | | | | | D |
| | | | | | | | | | | | | | | | |
| GR-SB-4-2 | | | 250 ml | 1 | | | | | | | | | | | HOLD 11A |
| | | | | | | | | | | | | | | | |
| GR-SB-4-3 | | | 250 ml | 1 | | | | | | | | | | | HOLD 12A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN / CH2M HILL (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan Date/Time 4/4/94 8.45
Received by: Date/Time 4/5/94 845
Relinquished by: EXPRESS IT COURIER Date/Time
Received at Lab by: Date/Time 4/5/94 100
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ______________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

**Clayton**
ENVIRONMENTAL
CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page ___ of 6 |
| Project No. | |
| Batch No. 9404056 | |
| Ind. Code | W.P. P |
| Date Logged In 4/6/94 | By |

**REPORT RESULTS TO**

Name SCUWD  Title CAROL PRESLEY
Company CH2M HILL  Dept.
Mailing Address
City, State, Zip
Telephone No.  Telefax No.

Purchase Order No.  Client Job No.

**SEND INVOICE TO**

Name
Company  Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Pb, Cu | TCLP Pb, Cu | ACUTE AQUATIC TOXICITY | REACTIVITY SULFIDE, CYANIDE | | | | | | | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-3-1 | 4/4/94 | SOIL | 250ml | 1 | | | | | | | | | | | HOLD 07A |
| | | | | | | | | | | | | | | | |
| GR-SB-3-2 | | | 250ml | 2 | X | X | | | | | | | | | * 08A, B |
| GR-SB-3-2 | | | BAG | 1 | | | | | | | | | | | HOLD C |
| GR-SB-3-2 | | | 250ml | 1 | | | | X | | | | | | | D |
| GR-SB-3-2 | | | 60ml | 1 | | | X | | | | | | | | E |
| | | | | | | | | | | | | | | | HOLD |
| GR-SB-3-3 | | | 250ml | 1 | | | | | | | | | | | 6 09A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**

Collected by: JOHN RYAN / CH2M (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan  Date/Time 4/5/94 8.45
Received by:  Date/Time 4/5/94 845
Relinquished by: EXPRESS-IT  Date/Time COURIER
Received at Lab by:  Date/Time 4/5/94 1030
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ______________
(Client Signature Must Accompany Request)

* 4/5 missing 1x250ml jar for GR-SB-3-2

Rec'd a 4/6 am
logged with this Batch #.

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Nov' MI 48375
(3 44-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Cl Retains

**Clayton**
ENVIRONMENTAL CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

| | |
|---|---|
| For Clayton Use Only | Page ___ of 6 |
| Project No. | |
| Batch No. 9404056 | |
| Ind. Code / | W.P. / |
| Date Logged In 4/6/94 | By |

**REPORT RESULTS TO**
Name SCVWD
Title CAROL
Company CH2M HILL
Dept.
Mailing Address
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No.
Client Job No.

**SEND INVOICE TO**
Name SC~~[illegible]~~ VWD
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | AIR VOLUME (specify units) | Number of Containers | STLC Pb | ACUTE AQUATIC TOXICITY | REACTIVITY SULFIDE, CYANIDE | | | | | | | | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-2-1 | 4/4/94 | SOIL | 250ml | 1 | X | | | | | | | | | | 04A |
| GR-SB-2-1 | 4/4/94 | | 5lb BAG | 1 | | | | | | | | | | | HOLD B |
| GR-SB-2-1 | | | 60ml | 1 | | X | | | | | | | | | C |
| GR-SB-2-1 | | | 250ml | 1 | | | X | | | | | | | | D |
| | | | | | | | | | | | | | | | |
| GR-SB-2-2 | | | 250ml | 1 | | | | | | | | | | | HOLD 05A |
| | | | | | | | | | | | | | | | |
| GR-SB-2-3 | | | 250ml | 1 | | | | | | | | | | | HOLD 06A |
| | | | | | | | | | | | | | | | |
| | ↓ | ↓ | | | | | | | | | | | | | |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN (print)
Collector's Signature: John Ryan
Relinquished by: J. Ryan Date/Time 4/5/94 8:45
Received by: Date/Time 4/5/94 845
Relinquished by: EXPRESS-IT Courier Date/Time
Received at Lab by: Date/Time 4/5/94 100pm
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ______________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48375
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(908) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(510) 426-2657

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

**Clayton**
ENVIRONMENTAL CONSULTANTS

# REQUEST FOR LABORATORY ANALYTICAL SERVICES

-1

For Clayton Use Only | Page 1 of 6

Project No.
Batch No. 9404056
Ind. Code
W.P.
Date Logged In 4/6/94
By

**REPORT RESULTS TO**
Name SCVWD
Title CAROL PRESLEY
Company CH2M HILL
Dept.
Mailing Address GUADALUPE RIVER
City, State, Zip
Telephone No.
Telefax No.

Purchase Order No.
Client Job No.

**SEND INVOICE TO**
Name SCVWD
Company
Dept.
Address
City, State, Zip

Date Results Req.: NORMAL
Rush Charges Authorized? ☐ Yes ☒ No
Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)
MEET ALL RCRA DL.

* Explanation of Preservative:

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

| CLIENT SAMPLE IDENTIFICATION | DATE SAMPLED | MATRIX/ MEDIA | CONTAINER ~~AIR VOLUME (specify units)~~ | Number of Containers | TCLP Pb,Cu | STLC Pb,Cu | ~~WET~~ | ACUTE AQUATIC TOXICITY | REACTIVITY SULFIDE CYANIDE | | | | | | FOR LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GR-SB-1-1 | 4/4/94 | SOIL | 250 ml | 2 | X | X | | | | | | | | | HOLD 01 A,B |
| GR-SB-1-1 | | | BAG | 1 | | | | | | | | | | | ~~HOLD~~ BC |
| GR-SB-1-1 | | | 60 ml | 1 | | | | X | | | | | | | ~~HOLD~~ BD |
| GR-SB-1-1 | | | 250 ml | 1 | | | | | X | | | | | | ~~HOLD~~ ~~BE~~ |
| GR-SB-1-2 | | | 250 ml | 1 | | | | | | | | | | | HOLD 02 A |
| GR-SB-1-3 | | | 250 ml | 1 | | | | | | | | | | | HOLD 03 A |

**CHAIN OF CUSTODY**
Collected by: JOHN RYAN CH2M HILL (print)
Collector's Signature: John Ryan
Relinquished by: John Ryan
Date/Time 4/5/94 8:45
Received by:
Date/Time 4/5/94 845
Relinquished by: EXPRESS-IT COURIER
Date/Time
Received at Lab by:
Date/Time 4/5/94 1100
Method of Shipment:
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: ______________ Date ______________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
No 48375
(31 -1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144

1252 Quarry Lane
Pleas , CA 94566
(510) .657

-1 0.5-3 FT
-2 3-5.5 FT
-3 [illegible]

2/92

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Cli etains

## Quality Assurance Results Summary
## for
## Clayton Project No. 94040.56

Clayton Lab Number: 9404007-13A
Ext./Prep. Method: EPA9010
Date: 04/13/94
Analyst: MCN
Std. Source: MALL 6881
Sample Matrix/Media: SOIL

Analytical Method: EPA9010
Instrument ID: 07487
Date: 04/14/94
Time: 08:30
Analyst: MCN
Units: mg/kg

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CYANIDE | 0.500 | 10.0 | 12.2 | 117 | 11.2 | 107 | 112 | 58 | 135 | 7.9 | 25 |

LCS = Laboratory Control Sample
LCL = Lower Control Limit
UCL = Upper Control Limit
ND = Not detected at or above limit of detection
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.56

Clayton Lab Number: 9404073-01A
Ext./Prep. Method: EPA3010
Date: 04/14/94
Analyst: RAH
Std. Source: A931201
Sample Matrix/Media: TCLP

Analytical Method: EPA6010
Instrument ID: 03891
Date: 04/15/94
Time: 12:00
Analyst: RAH
Units: MG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER | 0.490 | 10.0 | 10.4 | 99 | 10.3 | 98 | 99 | 75 | 125 | 1.0 | 20 |
| LEAD | ND | 5.00 | 4.53 | 91 | 4.51 | 90 | 90 | 75 | 125 | 0.4 | 20 |

---

LCS = Laboratory Control Sample
Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.56

Clayton Lab Number: 9404056-01A
Ext./Prep. Method: EPA 3010
Date: 04/12/94
Analyst: RAH
Std. Source: VHG 301959R2
Sample Matrix/Media: STLC

Analytical Method: EPA6010
Instrument ID: 03891
Date: 04/12/94
Time: 11:04
Analyst: DS
Units: MG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | ND | 10.0 | 8.87 | 89 | 9.03 | 90 | 90 | 75 | 125 | 1.8 | 20 |
| BARIUM | 5.30 | 10.0 | 14.2 | 89 | 14.3 | 90 | 90 | 75 | 125 | 0.7 | 20 |
| BERYLLIUM | ND | 10.0 | 8.78 | 88 | 8.90 | 89 | 88 | 75 | 125 | 1.4 | 20 |
| CADMIUM | ND | 10.0 | 8.88 | 89 | 8.99 | 90 | 89 | 75 | 125 | 1.2 | 20 |
| CHROMIUM | 0.450 | 10.0 | 9.35 | 89 | 9.46 | 90 | 90 | 75 | 125 | 1.2 | 20 |
| COBALT | 0.370 | 10.0 | 9.36 | 90 | 9.48 | 91 | 91 | 75 | 125 | 1.3 | 20 |
| COPPER | 0.640 | 10.0 | 9.55 | 89 | 9.66 | 90 | 90 | 75 | 125 | 1.1 | 20 |
| LEAD | 1.49 | 10.0 | 10.2 | 87 | 10.5 | 90 | 89 | 75 | 125 | 2.9 | 20 |
| MOLYBDENUM | ND | 10.0 | 9.12 | 91 | 9.26 | 93 | 92 | 75 | 125 | 1.5 | 20 |
| NICKEL | 0.940 | 10.0 | 9.86 | 89 | 9.99 | 90 | 90 | 75 | 125 | 1.3 | 20 |
| SILVER | ND | 10.0 | 8.78 | 88 | 8.89 | 89 | 88 | 75 | 125 | 1.2 | 20 |
| THALLIUM | ND | 10.0 | 8.81 | 88 | 8.94 | 89 | 89 | 75 | 125 | 1.5 | 20 |
| VANADIUM | 0.310 | 10.0 | 9.24 | 89 | 9.36 | 91 | 90 | 75 | 125 | 1.3 | 20 |
| ZINC | 2.02 | 10.0 | 11.0 | 89 | 11.1 | 91 | 90 | 75 | 125 | 1.4 | 20 |

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary
for
Clayton Project No. 94040.56

Clayton Lab Number: 9404037-05A
Ext./Prep. Method: EPA7.3.4.2
Date: 04/15/94
Analyst: TT
Std. Source: BAKER #61170
Sample Matrix/Media: SOIL

Analytical Method: EPA7_3_4_2
Instrument ID: 00008
Date: 04/19/94
Time: 10:00
Analyst: HYW
Units: mg/Kg

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| REACTIVE SULFIDE | ND | 272 | 250 | 92 | 240 | 88 | 90 | 75 | 125 | 4.1 | 25 |

LCS = Laboratory Control Sample
Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

# Quality Assurance Results Summary

## Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 94040.56

# WESTERN BIOASSAY LABORATORY
# FISH BIOASSAY MEASUREMENTS

## Fathead Minnow

For: Clayton Environmental Consultants

Sample ID#: 12536-47 Stock Date: 4/8/94

Client ID#: GR-SB- 1-1, 2-1, 3-2, 4-1, 5-2, 6-2, 7-2, 8-1, 9-1, 10-1, 11-3 12-1

| | | | | | |
|---|---|---|---|---|---|
| Average Length: | 31.8 | mm SL | Average Weight: | 0.45 | g |
| Standard D. (S): | 1.13 | mm SL | Standard D. (S): | 0.059 | g |
| Maximum Length: | 34.0 | mm SL | Maximum Weight: | 0.58 | g |
| Minimum Length: | 31.0 | mm SL | Minimum Weight: | 0.38 | g |

| | Fish Length (mm SL) | | Fish Weight (g) |
|---|---|---|---|
| 1. | 32.0 | 1. | 0.49 |
| 2. | 31.0 | 2. | 0.38 |
| 3. | 33.0 | 3. | 0.48 |
| 4. | 34.0 | 4. | 0.58 |
| 5. | 31.0 | 5. | 0.40 |
| 6. | 31.0 | 6. | 0.42 |
| 7. | 31.0 | 7. | 0.41 |
| 8. | 31.0 | 8. | 0.41 |
| 9. | 33.0 | 9. | 0.46 |
| 10. | 31.0 | 10. | 0.45 |

Remarks:

Measured: 4/14/94

**Westeri assay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC TE BIOASSAY
**Hazardous Waste Test**
Fathead Minnow

| | | | |
|---|---|---|---|
| CLIENT: | Clayton Environmental Consultants | ATTENTION: | Suzanne Silvera |
| SAMPLE ID#: | 12541 | SAMPLE DESCRIPTION: | soil |
| TESTING DATES: | 4/9/94 to 4/13/94 | | |
| CLIENT ID#: | GR-SB-6-2 | | |

| | 4/9/94 INITIAL | | | | 4/10/94 24-HOUR | | | | 4/11/94 48-HOUR | | | | 4/12/94 72-HOUR | | | | 4/13/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 19.7 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.4 | 6.5 | 20.0 |
| Control-B | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 20.1 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.4 | 6.7 | 19.9 |
| 250-A | 10 | 8.1 | 9.1 | 19.3 | 10 | 8.1 | 9.0 | 19.3 | 10 | 7.5 | 8.2 | 20.1 | 10 | 7.2 | 8.2 | 20.3 | 10 | 7.0 | 6.7 | 20.1 |
| 250-B | 10 | 8.0 | 9.1 | 19.3 | 10 | 7.9 | 9.0 | 19.3 | 10 | 7.5 | 8.3 | 20.1 | 10 | 7.2 | 8.2 | 20.5 | 10 | 7.0 | 6.6 | 20.3 |
| 500-A | 10 | 8.0 | 9.1 | 19.3 | 10 | 7.9 | 9.0 | 19.4 | 10 | 7.5 | 8.2 | 20.2 | 10 | 7.2 | 8.3 | 20.5 | 10 | 7.0 | 6.6 | 20.2 |
| 500-B | 10 | 8.0 | 9.1 | 19.3 | 10 | 7.9 | 9.0 | 19.4 | 10 | 7.4 | 8.1 | 20.4 | 10 | 7.2 | 8.1 | 20.6 | 10 | 7.0 | 6.7 | 20.2 |
| 750-A | 10 | 8.0 | 9.1 | 19.0 | 10 | 7.9 | 9.0 | 19.3 | 10 | 7.4 | 8.3 | 20.4 | 10 | 7.3 | 8.1 | 20.3 | 10 | 7.0 | 6.5 | 20.3 |
| 750-B | 10 | 8.1 | 9.1 | 19.1 | 10 | 7.9 | 9.0 | 19.1 | 10 | 7.4 | 8.2 | 20.5 | 10 | 7.3 | 8.2 | 20.6 | 10 | 7.0 | 6.4 | 20.3 |

| | |
|---|---|
| 96-hr. LC50: | >750 mg/L |
| 95% Confidence Limits: | Not Applicable |
| 96-hr. Final Percent Survival: | Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100% |

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 32, 54; 750 mg/L = 39, 65
Final Alkalinity, Hardness (mg/L): Control = 39, 49; 750 mg/L = 40, 56

Test Supervisor:

Verification:

HAZWASTE

WBL

Wester assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC TE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera
SAMPLE ID#: 12540 SAMPLE DESCRIPTION: soil TESTING DATES: 4/9/94 to 4/13/94
CLIENT ID#: GR-SB-5-2

| | 4/9/94 INITIAL | | | | 4/10/94 24-HOUR | | | | 4/11/94 48-HOUR | | | | 4/12/94 72-HOUR | | | | 4/13/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 19.7 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.4 | 6.5 | 20.0 |
| Control-B | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 20.1 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.4 | 6.7 | 19.9 |
| 250-A | 10 | 8.0 | 9.1 | 19.0 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.4 | 8.3 | 19.9 | 10 | 7.2 | 8.2 | 20.3 | 10 | 7.0 | 6.5 | 20.0 |
| 250-B | 10 | 7.9 | 9.1 | 19.0 | 10 | 8.0 | 8.9 | 19.1 | 10 | 7.3 | 8.0 | 20.0 | 10 | 7.2 | 8.0 | 20.4 | 10 | 7.0 | 6.6 | 20.0 |
| 500-A | 10 | 7.9 | 9.1 | 19.2 | 10 | 8.0 | 8.9 | 19.1 | 10 | 7.3 | 8.1 | 20.1 | 10 | 7.2 | 8.1 | 20.6 | 10 | 7.0 | 6.7 | 20.2 |
| 500-B | 10 | 7.9 | 9.1 | 19.2 | 10 | 8.0 | 8.8 | 19.3 | 10 | 7.2 | 8.2 | 19.9 | 10 | 7.2 | 8.0 | 20.5 | 10 | 7.0 | 6.6 | 20.3 |
| 750-A | 10 | 7.9 | 9.1 | 19.2 | 10 | 8.0 | 8.8 | 19.3 | 10 | 7.4 | 8.4 | 20.2 | 10 | 7.2 | 8.0 | 20.6 | 10 | 7.1 | 6.7 | 20.2 |
| 750-B | 10 | 7.9 | 9.1 | 19.2 | 10 | 8.0 | 8.6 | 19.0 | 10 | 7.4 | 8.2 | 20.2 | 10 | 7.3 | 8.1 | 20.6 | 10 | 7.1 | 6.9 | 20.2 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 32, 54; 750 mg/L = 31, 52
Final Alkalinity, Hardness (mg/L): Control = 39, 49; 750 mg/L = 43, 61

Test Supervisor:

Verification:

WBL

**Western Bioassay Laboratory**
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

# STATIC ACUTE BIOASSAY
## Hazardous Waste Test
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera
SAMPLE ID#: 12539 SAMPLE DESCRIPTION: soil TESTING DATES: 4/9/94 to 4/13/94
CLIENT ID#: GR-SB-4-1

| | 4/9/94 INITIAL | | | | 4/10/94 24-HOUR | | | | 4/11/94 48-HOUR | | | | 4/12/94 72-HOUR | | | | 4/13/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 19.7 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.4 | 6.5 | 20.0 |
| Control-B | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 20.1 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.4 | 6.7 | 19.9 |
| 250-A | 10 | 7.9 | 9.1 | 19.2 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.5 | 8.2 | 20.2 | 10 | 7.2 | 8.3 | 20.6 | 10 | 7.1 | 7.5 | 20.2 |
| 250-B | 10 | 7.8 | 9.1 | 19.3 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.4 | 8.3 | 20.3 | 10 | 7.3 | 8.3 | 20.6 | 10 | 7.1 | 7.6 | 20.3 |
| 500-A | 10 | 7.8 | 9.1 | 19.3 | 10 | 7.9 | 8.9 | 19.0 | 10 | 7.5 | 8.2 | 20.3 | 10 | 7.3 | 8.2 | 20.6 | 10 | 7.2 | 7.6 | 20.4 |
| 500-B | 10 | 7.8 | 9.1 | 19.3 | 10 | 7.9 | 8.9 | 19.0 | 10 | 7.4 | 8.0 | 20.3 | 10 | 7.3 | 8.2 | 20.7 | 10 | 7.1 | 6.9 | 20.4 |
| 750-A | 10 | 7.8 | 9.1 | 19.2 | 10 | 7.9 | 8.9 | 19.0 | 10 | 7.4 | 8.2 | 20.4 | 10 | 7.7 | 8.2 | 20.5 | 10 | 7.1 | 6.7 | 20.4 |
| 750-B | 10 | 7.8 | 9.1 | 19.2 | 10 | 7.3 | 8.9 | 19.0 | 10 | 7.5 | 8.0 | 20.0 | 10 | 7.8 | 8.2 | 20.7 | 10 | 7.2 | 7.8 | 20.3 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 32, 54; 750 mg/L = 34, 62
Final Alkalinity, Hardness (mg/L): Control = 39, 49; 750 mg/L = 44, 56

Test Supervisor:
Verification:

HAZWASTE

WBL

Western [illegible]assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

# STATIC [illegible]TE BIOASSAY
## Hazardous Waste Test
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera

SAMPLE ID#: 12538 SAMPLE DESCRIPTION: soil TESTING DATES: 4/9/94 to 4/13/94

CLIENT ID#: GR-SB-3-2

| | 4/9/94 | | | | 4/10/94 | | | | 4/11/94 | | | | 4/12/94 | | | | 4/13/94 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INITIAL | | | | 24-HOUR | | | | 48-HOUR | | | | 72-HOUR | | | | 96-HOUR,FINAL | | | |
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 19.7 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.4 | 6.5 | 20.0 |
| Control-B | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 20.1 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.4 | 6.7 | 19.9 |
| 250-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.6 | 8.3 | 20.6 | 10 | 7.1 | 8.3 | 20.5 | 10 | 7.0 | 6.5 | 20.0 |
| 250-B | 10 | 7.9 | 9.1 | 19.0 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.6 | 8.4 | 20.5 | 10 | 7.1 | 8.1 | 20.5 | 10 | 7.0 | 6.4 | 19.9 |
| 500-A | 10 | 7.8 | 9.1 | 19.0 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.4 | 8.3 | 20.3 | 10 | 7.1 | 8.1 | 20.5 | 10 | 7.0 | 6.7 | 20.0 |
| 500-B | 10 | 7.8 | 9.1 | 19.0 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.4 | 8.2 | 20.4 | 10 | 7.1 | 8.2 | 20.7 | 10 | 7.0 | 6.8 | 20.1 |
| 750-A | 10 | 7.8 | 9.1 | 19.4 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.4 | 8.0 | 20.3 | 10 | 7.1 | 8.1 | 20.5 | 10 | 7.0 | 6.7 | 20.3 |
| 750-B | 10 | 7.8 | 9.1 | 19.4 | 10 | 8.0 | 8.9 | 19.0 | 10 | 7.4 | 8.2 | 20.3 | 10 | 7.1 | 8.0 | 20.7 | 10 | 7.0 | 6.6 | 20.4 |

96-hr. LC50: >750 mg/L

95% Confidence Limits: Not Applicable

96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%

Remarks: Initial Alkalinity, Hardness (mg/L): Control = 32, 54; 750 mg/L = 41, 57

Final Alkalinity, Hardness (mg/L): Control = 39, 49; 750 mg/L = 39, 65

Test Supervisor: Richard Miteson Verification: Julianne Gegley

*WASTE

WBL

Westeri [illegible]assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

**STATIC [illegible]TE BIOASSAY**
**Hazardous Waste Test**
Fathead Minnow

CLIENT: Clayton Environmental Consultants ATTENTION: Suzanne Silvera
SAMPLE ID#: 12537 SAMPLE DESCRIPTION: soil TESTING DATES: 4/9/94 to 4/13/94
CLIENT ID#: GR-SB-2-1

| | 4/9/94 INITIAL | | | | 4/10/94 24-HOUR | | | | 4/11/94 48-HOUR | | | | 4/12/94 72-HOUR | | | | 4/13/94 96-HOUR,FINAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C | Live | pH | DO mg/L | Temp °C |
| Control-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 19.7 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.4 | 6.5 | 20.0 |
| Control-B | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 20.1 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.4 | 6.7 | 19.9 |
| 250-A | 10 | 7.8 | 9.1 | 18.9 | 10 | 8.0 | 9.0 | 19.0 | 10 | 7.3 | 8.3 | 19.6 | 10 | 7.0 | 8.4 | 20.3 | 10 | 7.2 | 6.9 | 19.8 |
| 250-B | 10 | 7.8 | 9.1 | 18.9 | 10 | 8.0 | 9.0 | 19.0 | 10 | 7.3 | 8.4 | 19.4 | 10 | 7.1 | 8.2 | 20.4 | 10 | 7.2 | 6.8 | 19.8 |
| 500-A | 10 | 7.8 | 9.1 | 18.8 | 10 | 8.0 | 9.0 | 19.1 | 10 | 7.3 | 7.9 | 20.0 | 10 | 7.1 | 8.1 | 20.5 | 10 | 7.2 | 6.2 | 19.9 |
| 500-B | 10 | 7.8 | 9.1 | 18.9 | 10 | 8.0 | 9.0 | 19.1 | 10 | 7.2 | 8.1 | 19.9 | 10 | 7.1 | 8.1 | 20.3 | 10 | 7.2 | 6.3 | 19.8 |
| 750-A | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.9 | 9.0 | 19.3 | 10 | 7.3 | 8.4 | 20.0 | 10 | 7.2 | 8.2 | 20.3 | 10 | 7.1 | 6.9 | 20.0 |
| 750-B | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.9 | 8.9 | 19.3 | 10 | 7.4 | 8.3 | 20.0 | 10 | 7.2 | 8.1 | 20.4 | 10 | 7.0 | 6.7 | 20.1 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 32, 54; 750 mg/L = 32, 64
Final Alkalinity, Hardness (mg/L): Control = 39, 49; 750 mg/L = 40, 57

Test Supervisor:
Verification:

HAZWASTE

WBL

Wester[illegible]assay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

## STATIC [illegible]TE BIOASSAY
### Hazardous Waste Test
### Fathead Minnow

CLIENT: Clayton Environmental Consultants
ATTENTION: Suzanne Silvera
SAMPLE ID#: 12536
SAMPLE DESCRIPTION: soil
TESTING DATES: 4/9/94 to 4/13/94
CLIENT ID#: GR-SB-1-1

| | 4/9/94 | | | | 4/10/94 | | | | 4/11/94 | | | | 4/12/94 | | | | 4/13/94 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INITIAL | | | | 24-HOUR | | | | 48-HOUR | | | | 72-HOUR | | | | 96-HOUR,FINAL | | | |
| TEST CONCENTRATION mg/L | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C | Live | pH | DO mg/L | Temp ° C |
| Control-A | 10 | 7.9 | 9.1 | 19.0 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 19.7 | 10 | 7.2 | 8.5 | 20.5 | 10 | 7.4 | 6.5 | 20.0 |
| Control-B | 10 | 7.9 | 9.1 | 18.9 | 10 | 7.8 | 8.6 | 19.0 | 10 | 7.5 | 8.4 | 20.1 | 10 | 7.2 | 8.5 | 20.6 | 10 | 7.4 | 6.7 | 19.9 |
| 250-A | 10 | 7.8 | 9.1 | 18.9 | 10 | 7.9 | 8.9 | 19.4 | 10 | 7.4 | 8.1 | 20.1 | 10 | 7.0 | 7.2 | 20.7 | 10 | 7.2 | 6.9 | 19.6 |
| 250-B | 10 | 7.8 | 9.1 | 18.9 | 10 | 7.9 | 8.9 | 19.3 | 10 | 7.4 | 8.2 | 20.1 | 10 | 7.0 | 7.1 | 20.6 | 10 | 7.1 | 6.1 | 19.7 |
| 500-A | 10 | 7.8 | 9.1 | 18.8 | 10 | 8.1 | 8.9 | 19.3 | 10 | 7.4 | 8.4 | 19.7 | 10 | 7.0 | 6.7 | 20.6 | 10 | 7.1 | 5.8 | 19.7 |
| 500-B | 10 | 7.8 | 9.1 | 18.8 | 10 | 8.1 | 8.3 | 19.2 | 10 | 7.3 | 8.4 | 19.7 | 10 | 7.0 | 7.0 | 20.6 | 10 | 7.1 | 5.8 | 19.8 |
| 750-A | 10 | 7.8 | 9.1 | 18.8 | 10 | 8.1 | 8.6 | 19.1 | 10 | 7.3 | 8.3 | 19.4 | 10 | 6.9 | 6.9 | 20.6 | 10 | 7.1 | 6.7 | 19.8 |
| 750-B | 10 | 7.8 | 9.1 | 18.9 | 10 | 8.1 | 8.3 | 19.4 | 10 | 7.2 | 8.2 | 19.6 | 10 | 6.9 | 6.9 | 20.4 | 10 | 7.0 | 6.9 | 19.9 |

96-hr. LC50: >750 mg/L
95% Confidence Limits: Not Applicable
96-hr. Final Percent Survival: Control = 100%; 250 mg/L = 100%; 500 mg/L = 100%; 750 mg/L = 100%
Remarks: Initial Alkalinity, Hardness (mg/L): Control = 32, 54; 750 mg/L = 35, 69
Final Alkalinity, Hardness (mg/L): Control = 39, 49; 750 mg/L = 40, 49

Test Supervisor:
Verification:

Sample #12546:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12547:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

The transcribed data sheets and chain-of-custody for these tests are enclosed. If you have any questions concerning this report please contact Linda Mortensen, Hazardous Waste and Acute Effluent Testing Specialist, at the lab (510) 686-3215.

Sample #12541:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12542:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12543-47:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12543:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12544:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12545:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

**SUMMARY:**

Sample #12536-42:
Fathead minnow 96-hour percent survival in the Control was 100%.

Sample #12536:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12537:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12538:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12539:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

Sample #12540:
Fathead minnow 96-hour percent survival in the test concentrations was 100% for 250 mg/L, 100% for 500 mg/L and 100% for 750 mg/L.

The 96-hour LC50 >750 mg/L.

WESTERN BIOASSAY LABORATORIES

**Date:** April 19, 1994

**To:**
Ms. Suzanne Silvera
Clayton Environmental Consultants
1252 Quary Lane
Pleasanton, CA 94566

**From:**
Linda S. Mortensen
Hazardous Waste and Acute Effluent
Testing Specialist

Julianne C. Fegley
Laboratory Coordinator

**Subject:** Aquatic Toxicity Testing Results for Hazardous Waste Testing
P.O.#48508

---

**SAMPLE MATRIX AND I.D.:** Twelve solid samples #12536 (GR-SB-1-1), #12537 (GR-SB-2-1), #12538 (GR-SB-3-2), #12539 (GR-SB-4-1), #12540 (GR-SB-5-2), #12541 (GR-SB-6-2), #12542 (GR-SB-7-2), #12543 (GR-SB-8-1), #12544 (GR-SB-9-1), #12545 (GR-SB-10-1), #12546 (GR-SB-11-3) and #12547 (GR-SB-12-1).

**TREATMENT DILUTIONS (mg/L):** 250, 500, 750 and Control run in soft carbon filtered tap water mixed with deionized water of 40-48 mg/L hardness and in duplicate with 10 fish/6 L tank and 20 fish/treatment.

**TESTING PERIOD:** Received 4/7/94; Tested 4/9/94 - 4/11/94 and 4/11/94 - 4/15/94.

**BIOASSAY TEST(S):** Fathead minnow (*Pimephales promelas*) 96-hour static Hazardous Waste Toxicity.

**METHODS:** WBL's hazardous waste aquatic toxicity test protocol based on "Standard Methods for the Examination of Water and Wastewater", 18th Edition, American Public Health Association, 1992; California's Title 22 Code, Section #66261.24(a)(6); "Static Acute Bioassay Procedures for Hazardous Waste Samples" (Polisini and Miller, 1988), California Department of Fish and Game; and as certified by the State of California's Department of Toxic Substance Control (CA. EPA).

T-22.SCN

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.56

| | | | |
|---|---|---|---|
| Sample Identification: | METHOD BLANK | Date Sampled: | -- |
| Lab Number: | 9404056-19 | Date Received: | -- |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | <0.1 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | <0.1 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.56

Sample Identification: GR-SB-6-2
Lab Number: 9404056-17
Sample Matrix/Media: SOIL

Date Sampled: 04/04/94
Date Received: 04/05/94

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 1.0 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 2.3 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
: Information not available or not applicable

### Analytical Results
### for
### Santa Clara Valley Water District
### Client Reference: 94-1-3015-107
### Clayton Project No. 94040.56

|  |  |  |  |
|---|---|---|---|
| Sample Identification: | GR-SB-5-2 | Date Sampled: | 04/04/94 |
| Lab Number: | 9404056-14 | Date Received: | 04/05/94 |
| Sample Matrix/Media: | SOIL |  |  |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.7 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 5.4 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

[illegible] Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.56

Sample Identification: GR-SB-4-1
Lab Number: 9404056-10
Sample Matrix/Media: SOIL

Date Sampled: 04/04/94
Date Received: 04/05/94

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4.2 |
| STLC Copper | 0.7 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 2.4 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
· Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.56

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-3-2 | Date Sampled: | 04/04/94 |
| Lab Number: | 9404056-08 | Date Received: | 04/05/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.3 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 0.3 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

. Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.56

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-2-1 | Date Sampled: | 04/04/94 |
| Lab Number: | 9404056-04 | Date Received: | 04/05/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4. |
| STLC Copper | 0.5 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 1.1 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |

ND: Not detected at or above limit of detection
· Information not available or not applicable

# Analytical Results
for
Santa Clara Valley Water District
Client Reference: 94-1-3015-107
Clayton Project No. 94040.56

| | | | |
|---|---|---|---|
| Sample Identification: | GR-SB-1-1 | Date Sampled: | 04/04/94 |
| Lab Number: | 9404056-01 | Date Received: | 04/05/94 |
| Sample Matrix/Media: | SOIL | | |

| Analyte | Concentration | Method Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Method Reference |
|---|---|---|---|---|---|---|---|
| Reactive Cyanide | <1 | 1 | mg/kg | -- | 04/14/94 | -- | EPA 9010 |
| Reactive Sulfide | <10 | 10 | mg/kg | -- | 04/19/94 | -- | SW 7.3.4 |
| STLC Copper | 0.6 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| STLC Lead | 1.5 | 0.1 | mg/L | 04/08/94 | 04/12/94 | CAM WET | EPA 6010 |
| TCLP Copper | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |
| TCLP Lead | <0.1 | 0.1 | mg/L | 04/12/94 | 04/15/94 | EPA 1311 | EPA 6010 |

. Not detected at or above limit of detection
--: Information not available or not applicable

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

April 19, 1994

Ms. Charleen Renati
Environmental Compliance Department
SANTA CLARA VALLEY WATER DISTRICT
5750 Almaden Expressway
San Jose, CA 95118

Client Ref.: 94-1-3015-107
Clayton Project No.: 94040.56

Dear Ms. Renati:

Enclosed are our analytical laboratory report and quality assurance results summary for the samples received on April 5, 1994. Acute Aquatic Toxicity analysis was performed by Western Bioassay and a copy of their report is enclosed. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of after June 18, 1994, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

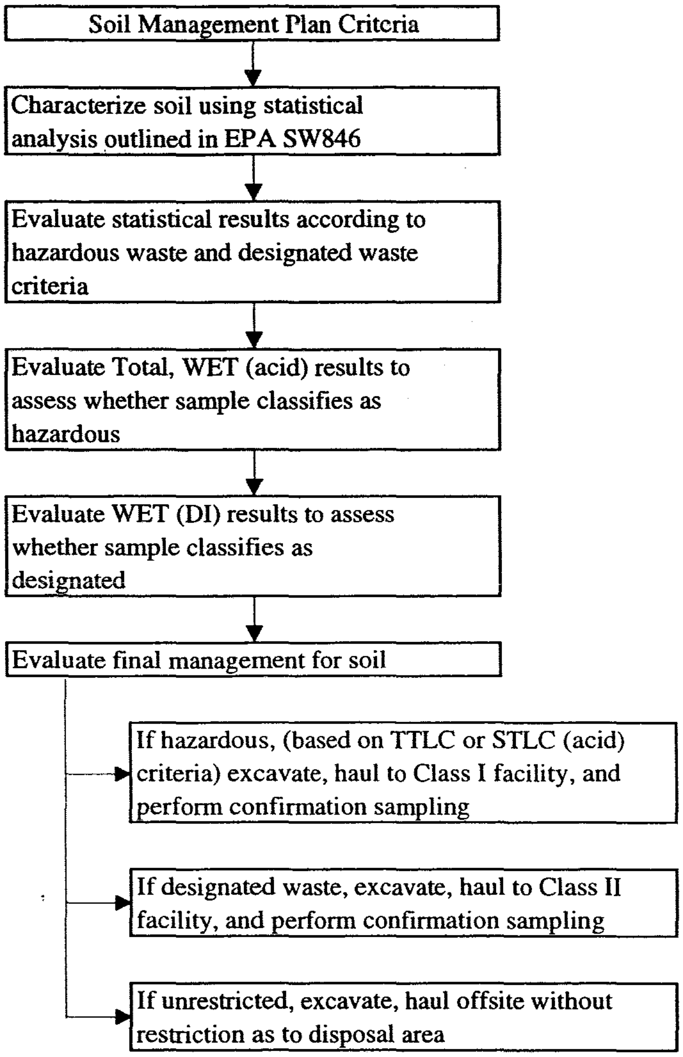
Harriotte A. Hurley, CIH
Director, Laboratory Services
Western Operations

HAH/tjb

Attachments

# APPENDIX A

# Figure 3-1
# Summary of Soil Classification Methodoloy
# Guadalupe River Project


Soil Management Plan Criteria
Characterize soil using statistical analysis outlined in EPA SW846
Evaluate statistical results according to hazardous waste and designated waste criteria
Evaluate Total, WET (acid) results to assess whether sample classifies as hazardous
Evaluate WET (DI) results to assess whether sample classifies as designated
Evaluate final management for soil
If hazardous, (based on TTLC or STLC (acid) criteria) excavate, haul to Class I facility, and perform confirmation sampling
If designated waste, excavate, haul to Class II facility, and perform confirmation sampling
If unrestricted, excavate, haul offsite without restriction as to disposal area